ATTACHMENT 6

EFFLUENT LIMITATIONS/MONITORING RATIONALE/SUITABLE DATA/ ANTIDEGRADATION/ANTIBACKSLIDING

ATTACHMENT 6
EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS
RATIONALE & SUITABLE DATA

VPDES Permit No. VA0004103 is a major industrial discharger from the operation of the Yorktown Power Station that generates electricity with steam produced by the combustion of fossil fuel. The facility is located on the shore of the York River in Newport News, Virginia. The facility operates 24 hours per day, 365 days per year.

The permittee defined their activity as SIC 4911, Electric Power which is categorized in the Federal Effluent Guidelines (FEG), 40 CFR Part 423 - Steam Electric Power Generating Point Source Category. As in the previous issued permits for this facility, effluent limitations and monitoring requirements will be developed based on these guidelines and best professional judgment (BPJ).

Data Review Summary and Changes

Guidance Memo 96-001 recommends that chemical water quality-based limits not be placed on storm water outfalls at this time because the methodology for developing limits and the proper method of sampling is still a concern and under review by EPA. Therefore, in the interim, screening criteria have been established at 2 times the acute criteria. These criteria are applied solely to identify those pollutants that should be given special emphasis during development of the Storm Water Pollution Prevention Plan (SWPPP). Any storm water outfall data (pollutant specific) submitted by the permittee which were above the established screening criteria levels requires monitoring in Part I.A. of the permit for that specific outfall and pollutant. Based on the above, screening criteria and monitoring were established for copper, nickel and zinc at a number of outfalls in the permit. In addition, toxicity screening was required for these same outfalls at which metals monitoring was required. Based on a review of the available data from DMR's and the application data submitted by the permittee, no changes were made for this reissuance. Toxicity screening was retained on outfalls where chemical or biological data indicated a potential for toxicity to aquatic organisms. Toxicity screening was not retained on outfalls 011 and 012 for this reissuance based on toxicity data submitted, see Attachment 8.

Specifically, outfalls 008 and 014 have been retained in the storm water evaluation mode for copper, nickel and zinc based on available data. The data that were reviewed are presented in Attachment 6. At outfall 010, monitoring was reduced during the last reissuance and will remain at a frequency of once per year for dissolved copper with no toxicity screening associated at this outfall.

The SWPPP required in this permit is designed to reduce pollutants in storm water runoff. Quarterly monitoring for copper, nickel and zinc at outfalls 008 and 014 and annual toxicity screening is included in the reissued permit. Pollutant specific monitoring results above the screening criteria or toxicity screening which results in an LC50 of less than 100% effluent, do not indicate unacceptable values; however, they do justify the need to reexamine the effectiveness of the SWPPP and any best management practices (BMPs) being utilized. The goal of the SWPPP is to reduce pollutants, especially those identified by the application of the screening criteria, including toxicity, to the maximum extent practicable. An annual report is to be submitted to the Regional office and shall include the data collected the previous year with an indication if the SWPPP or any BMPs were modified based on the monitoring results.

Changes were made to reporting for Internal Outfalls 106, 107, 108, and 110. In previous issuances of this permit, these outfalls were monitored individually but per permittee's request to have the outfalls removed and BPJ, these outfalls will no longer require individual monitoring or reporting but parameters will be sampled and reported through Outfall 002. All the outfalls discharge to the canal and commingle with process wastewater prior to discharge. The discharge canal provides additional treatment for the identified parameters. The outfalls may not be removed from the permit as the outfalls are still internal discharge points. The outfalls are internal to Outfall 001, all sampling is performed at Outfall 002; therefore grab samples for TSS, Dissolved Copper and Dissolved Zn will be collected at Outfall 002 and reported on the DMR for Outfall 002.

No changes were made to Outfall 011, 109, 112, 205 as explained in the individual outfall descriptions that follow.

Outfall 001 and 002

Outfalls 001 and 002 discharge condenser cooling water and have contributions from internal outfalls. Outfall 001 discharges cooling water through the outfall pumps and receives contributions from internal outfalls 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 112. The long term average flow through this outfall is 680 mgd. Outfall 002 discharges cooling water through the outfall weir and receives contributions from internal outfalls 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 202, 203, 204, 205. The long term average flow through this outfall is 282 mgd. Limits that are necessary due to activities at the internal outfalls will be placed on the internal outfalls, and not on outfalls 001 and 002. Federal regulations require that discharges from certain sources in this industrial category have numerical limitations included on the discharges from each specific source, whether it is an internal or external discharge. Federal regulations also allow for placing limits on internal outfalls where limits on the external outfalls are impractical due to sampling restraints or problems with dilution at the external outfalls. Therefore, at some internal outfalls to 001 and 002, numerical limitations will be put on the internal outfalls due to federal regulation requirements. At other internal outfalls, due to the large flows and numerous contributions to the external outfalls, it is more practical to assign necessary limitations to the internal outfalls. Therefore, outfalls 001 and 002 will be limited only for the parameters associated with the cooling water discharges.

Numerical limitations and monitoring frequencies for the two outfalls will be identical, as the cooling water discharged through the two outfalls is identical, and the flows at both outfalls are large enough to be considered similar enough to warrant similar monitoring frequencies. Realistically, the water discharged from these outfalls travel down one long discharge canal and are split near the end of the canal into two discreet discharge points. Monitoring frequencies in the previous permit have been reviewed and some monitoring frequencies have been reduced from the previous permit where it has been determined that less frequent monitoring is sufficient to determine compliance with the permit.

The sampling regime for these two outfalls will be as follows, due to the very similar nature of the outfalls. Outfall 002 will be monitored by grab samples for pH, TRC, phosphorus, TSS, Dissolved Copper, Dissolved Zinc, and Enterococci. Outfall 001 will not be sampled for these parameters; rather, the permittee shall use the monitoring results from outfall 002 to calculate the results for those parameters required at outfall 001 and shall report those results on the DMR for the appropriate outfall. Outfall 002 has been chosen as the outfall to actually be monitored due to the fact that there are five minor internal outfalls that flow to outfall 002, but would not flow to outfall 001. These minor internal outfalls are not expected to have a significant impact on the external outfall due to their source and very small contribution of flow to the external outfall.

Flow: No limit, monitoring required, frequency is 1/day, calculated. Basis is best professional judgment, and is typical for industrial permits with the ability to measure or calculate flow.

pH: Limits of 6.0 s.u. minimum, 9.0 s.u. maximum, frequency is 2/month by grab sample. Basis is best professional judgment to protect water quality.

Total Residual Chlorine: Limits of 0.021 mg/l monthly average, 0.026 mg/l daily maximum, frequency is 2/month by grab sample. Basis is water quality standards and agency advice memorandum dated October 8, 1999 addressing chlorine limitations. Previous permit contained limits of non-detectable. New water quality criteria for chlorine now require numerical limitations in permits; the numerical limits comply with antidegradation and anti-backsliding requirements.

Total Phosphorus: Limit of 2.0 mg/l daily maximum, frequency is 1/6 months, by grab sample. Basis is best professional judgment based on the State's policy for nutrient enriched waters (9 VAC 25-40-10 et seq). This policy applies to the Chesapeake Bay and all associated tributaries. Although the newest version of 9 VAC 25-40-10 et seq does not require a phosphorus limitation for facilities that discharge to nutrient enriched waters in the Chesapeake Bay watershed, antibacksliding regulations do not allow the relaxation of a limitation if the relaxation of that limit would be based on new regulations. To maintain consistency with other facilities with a phosphorus limitation and to comply with the significant figures guidance, all phosphorus limitations were changed from 2 mg/l to 2.0 mg/l as stated in the newest version of 9 VAC 25-40-10 et seq. during the last reissuance of this permit. Monitoring frequency was reduced based on BPJ and good compliance data for the last three years.

Temperature: An instream thermal mixing zone has been established and has been specifically defined in the map presented in Attachment A of the permit. This mixing zone was developed through discussions between the State Water Control Board and the permittee. Instream temperatures must meet water quality standards at the edge of this approved mixing zone, and must be monitored once per year. The temperature mixing zone is specifically addressed in a special condition in this permit.

Heat Rejection: Limit of 57.41 x 10(8), daily maximum, monitoring frequency of continuous, and must be recorded. Basis is best professional judgment, and the limit was developed through discussions between the State Water Control Board and the permittee. See the attached memorandum dated April 7, 1977 from W.L. Woodfin, Jr. to provide additional information concerning this limit.

Total Suspended Solids: No limit, monitoring required, daily maximum, monitoring frequency is 1/year by grab sample. Basis is BPJ and guidance memoranda 93-010A, 96-001 and additional Advice regarding storm water dated March 29, 1999. This parameter is considered a good indicator of the effectiveness of storm water BMPs to meet the intentions of the storm water pollution prevention plan.

Dissolved Copper, Dissolved Zinc: No limit, monitoring required, monitoring frequency is 1/year by grab sample. Basis is BPJ. It is believed that one sample per year of these metals in the dissolved form will be sufficient to determine if screening criteria are necessary.

Enterococci: No limit, monitoring only, monitoring frequency is 1/3 months by grab sample. Basis is best professional judgment. The permittee reported enterococci at 102.4 MPN/100ml during the reapplication sampling event. DEQ has adopted new water quality standards for e.coli and enterococci as indicators of human sources of bacteria. Since the monitoring data submitted indicated that human bacterial contributions are present in the discharge this requirement will be placed in the permit.

Outfall 003 and 004

Outfalls 003 and 004 discharge storm water from the ash landfill. This is considered storm water associated with regulated industrial activity, and will be addressed as such in the permit. These outfalls are also subject to Federal Effluent Guideline limitations under Part 423 for the Steam Electric Power Generating Point Source Category. Although these outfalls discharge storm water, due to the use of sedimentation basins, a discharge event does not necessarily coincide with a specific precipitation event. Therefore, storm water language addressing sampling methodologies does not apply to these outfalls.

These outfalls have been determined to be substantially identical; therefore, sampling and reporting requirements will be similar for both outfalls in the reissued permit. Outfall 003 has shown toxicity during the previous permit terms and will be subject to toxicity testing requirements in the reissued permit. Outfall 004 will continue with toxicity sampling with no specialized requirements as are required for outfall 003. See Attachment 8 for Toxicity Testing rationales.

Monitoring frequencies reflect BPJ to adequately determine compliance with the permit requirements.

Flow: No limit, monitoring required, monthly average and daily maximum, as MGD, monitoring frequency of 1/month, estimate. Basis is best professional judgment, and is typical for industrial facilities.

pH: Limits of 6.0 s.u. minimum, 9.0 s.u. maximum, frequency is 1/month by grab sample. Basis is Section 423 of the 40 CFR, Federal Effluent Guidelines for the Steam Electric Power Generating Point Source Category.

Total Suspended Solids: 30 mg/l monthly average, 100 mg/l daily maximum, monitoring frequency of 1/month, by grab sample. Basis is Section 423 of the 40 CFR, Federal Effluent Guidelines for the Steam Electric Power Generating Point Source Category.

Oil and Grease: 15 mg/l monthly average, 20 mg/l daily maximum, monitoring frequency of 1/month, by grab sample. Basis is Section 423 of the 40 CFR, Federal Effluent Guidelines for the Steam Electric Power Generating Point Source Category.

Total Phosphorus: Limit of 2.0 mg/l daily maximum, frequency is 1/6 months, by grab sample. Basis is best professional judgment based on the State's policy for nutrient enriched waters (9 VAC 25-40-10 et seq). This policy applies to the Chesapeake Bay and all associated tributaries. Although the newest version of 9 VAC 25-40-10 et seq does not require a phosphorus limitation for facilities that discharge to nutrient enriched waters in the Chesapeake Bay watershed, antibacksliding regulations do not allow the relaxation of a limitation if the relaxation of that limit would be based on new regulations. To maintain consistency with other facilities with a phosphorus limitation and to comply with the significant figures guidance, all phosphorus limitations were changed from 2 mg/l to 2.0 mg/l as stated in the newest version of 9 VAC 25-40-10 et seq.

Outfall 005 and 006

These outfalls discharge backwash water from the Unit 1 (005) and Unit 2 (006) condensers. The permit will specifically prohibit the discharge of process wastewater from these outfalls, and there will be no monitoring or reporting required. Basis is best professional judgment, similar to the way other discharges similar in nature are addressed.

Outfall 007, 016, 017, 105, 202, 203 and 204

These outfalls contain discharge from the dewatering of the intake pump(s)(007), intake pump(s) leak collection pit (016), hydrostatic relief system (017), outfall pumps maintenance dewatering (105), outfall pumps pit sump (202), outfall pumps pit sump backup (203), and outfall pumps cooling and seal water (204). Outfalls 105, 202, 203, 204 are internal discharges to outfall 002. The permit will specifically prohibit the discharge of process wastewater from these outfalls, and there will be no monitoring or reporting required. Basis is best professional judgment, similar to the way other discharges similar in nature are addressed.

Outfalls 008 and 014

These outfalls discharge storm water from regulated industrial activities at the facility. Outfall 008 drains areas associated with ash handling, and in the vicinity of unit 3. Outfall 014 receives drainage from an area that contains the service road for the intake cooling water pump. The application for reissuance states that these outfalls are substantially identical As such, both outfalls will be addressed as similar outfalls, and data for outfall 008 will be considered representative for both outfalls.

As the outfalls are storm water associated with regulated industrial activity with no retention or treatment, the storm water language and sampling requirements will apply to these outfalls. These outfalls also have screening criteria requirements that are addressed in the storm water evaluation and pollution prevention plan special conditions.

Agency guidance memoranda 93-010A, dated December 9, 1993, 96-001, dated March 15, 1996 and Agency advice on storm water dated March 29, 1999 all address storm water discharges in VPDES permits and are used as references for determining sampling and reporting requirements for storm water outfalls. These outfalls have been retained in the storm water evaluation mode for copper, nickel and zinc based on available data. The data that were reviewed are presented elsewhere in Attachment 6. Based on available data for outfalls 008 and 014, BMP's should be reviewed by the permittee to reduce the concentrations of copper, nickel and zinc in the discharge. The goal of the SWPPP is to reduce pollutants, especially those identified by the application of the screening criteria, including toxicity, to the maximum extent practicable.

Flow: No limit, monitoring require, daily maximum as MG (volume, not flow), monitoring frequency of 1/3 months, estimate. Basis is best professional judgment using Agency guidance memoranda 93-010A, dated December 9, 1993, 96-001, dated March 15, 1996 and Agency advice on storm water dated March 29, 1999 as references for determining sampling and reporting requirements.

pH: Limits of NL s.u. minimum, NL s.u. maximum, frequency is 1/year by grab sample. Basis is best professional judgment to determine if limits are necessary to protect water quality. Previous data have not shown the need for limits at this time.

Total Phosphorus: Limit of 2.0 mg/l daily maximum, frequency is 1/Year, by grab sample. Basis is best professional judgment based on the State's policy for nutrient enriched waters (9 VAC 25-40-10 et seq). This policy applies to the Chesapeake Bay and all associated tributaries. Although the newest version of 9 VAC 25-40-10 et seq does not require a phosphorus limitation for facilities that discharge to nutrient enriched waters in the Chesapeake Bay watershed, antibacksliding regulations do not allow the relaxation of a limitation if the relaxation of that limit would be based on new regulations. To maintain consistency with other facilities with a phosphorus limitation and to comply with the significant figures guidance, all phosphorus limitations were changed from 2 mg/l to 2.0 mg/l as stated in the newest version of 9 VAC 25-40-10 et seq.

TPH: No limit, monitoring required, daily maximum, monitoring frequency is 1/year by grab sample. Basis is best professional judgment using the above documents as references. This parameter is also considered a good indicator of the effectiveness of storm water BMPs to meet the intentions of the storm water pollution prevention plan.

Total Suspended Solids: No limit, monitoring required, daily maximum, monitoring frequency is 1/year by grab sample. Basis is best professional judgment using the above documents as references. This parameter is also considered a good indicator of the effectiveness of storm water BMPs to meet the intentions of the storm water pollution prevention plan

Dissolved Copper, Dissolved Nickel, Dissolved Zinc: Guidance Memo 96-001 recommends that chemical water quality-based limits not be placed on storm water outfalls at this time because the methodology for developing limits and the proper method of sampling is still a concern and under review by EPA. Therefore, in the interim, screening criteria have been established at 2 times the acute criteria. These criteria are applied solely to identify those pollutants that should be given special emphasis during development of the Storm Water Pollution Prevention Plan (SWPPP). Any storm water outfall data submitted by the permittee which were above the established screening criteria levels requires monitoring in Part I.A. of the permit for that specific outfall and pollutant. Based on the above, screening criteria and monitoring were established in the previous permit for copper, nickel and zinc. In addition, toxicity screening is required for these same outfalls. The data submitted during the previous permit term were reviewed during the reissuance process, and it has been determined that these parameters will remain in the storm water management evaluation and monitoring frequencies will remain at 1/3 months.

The SWPPP required in this permit is designed to reduce pollutants in storm water runoff. Quarterly monitoring for the above noted pollutants and annual toxicity screening is included. Pollutant specific monitoring results above the screening criteria or toxicity screening which results in an LC50 of less than 100% effluent, do not indicate unacceptable values; however, they do justify the need to reexamine the effectiveness of the SWPPP and any best management practices (BMPs) being utilized. The goal of the SWPPP is to reduce pollutants, especially those identified by the application of the screening criteria, including toxicity, to the maximum extent practicable. An annual report is to be submitted to the Regional office and shall include the data collected the previous year with an indication if the SWPPP or any BMPs were modified based on the monitoring results.

OUTFALL 008 and 014 SEE ALL DATA ATTACHMENT 6						
PARAMETER	MONITORING DATA					2 X ACUTE CRITERION
Copper (ug/l)	<QL	<QL	**34**	**57**	<QL	**11.8**
	<QL	8	8	10	**14**	
Nickel (ug/l)	<QL	<QL	<QL	<QL	<QL	**150**
	<QL	<QL	<QL	<QL	<QL	
Zinc (ug/l)	<QL	79	110	**513**	108	**190**
	<QL	89	**1850**	**1310**	**285**	

Outfall 009, 013, 112, and 205

These outfalls discharge storm water not associated with regulated industrial activities. Agency guidance memoranda 93-010A, dated December 9, 1993, 96-001, dated March 15, 1996 and Agency advice on storm water dated March 29, 1999 all address storm water discharges in VPDES permits and are used as references for determining sampling and reporting requirements for storm water outfalls. In accordance with these documents, no monitoring or reporting will be required. Discharges of process wastewater will be specifically prohibited in the permit from these outfalls.

ATTACHMENT 6 - CONTINUED
EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS
RATIONALE & SUITABLE DATA

Outfall 010

This outfall discharges storm water from regulated industrial activities at the facility. The outfall drains an area which includes warehouse and adjacent areas. As the outfall is a storm water outfall associated with a regulated industrial activity with no retention or treatment, the storm water language and sampling requirements will apply to this outfall. This outfall previously had screening criteria requirements that were addressed in the storm water evaluation and pollution prevention plan special conditions. During the last reissuance of the permit monitoring frequency was reduced because review of data submitted indicated that this outfall does not exhibit a toxicity potential based on chemical specific or whole effluent toxicity data. Therefore, the outfall was removed from the toxicity screening portion of the permit and copper monitoring frequency was reduced. There are no changes for this parameter for this permit term, data submitted included in this attachment.

Agency guidance memoranda 93-010A, dated December 9, 1993, 96-001, dated March 15, 1996 and Agency advice on storm water dated March 29, 1999 all address storm water discharges in VPDES permits and are used as references for determining sampling and reporting requirements for storm water outfalls.

Flow: No limit, monitoring require, daily maximum as MG (volume, not flow), monitoring frequency of 1/year, estimate. Basis is best professional judgment using Agency guidance memoranda 93-010A, dated December 9, 1993, 96-001, dated March 15, 1996 and Agency advice on storm water dated March 29, 1999 as references for determining sampling and reporting requirements.

pH: Limits of NL s.u. minimum, NL s.u. maximum, frequency is 1/year by grab sample. Basis is best professional judgment to determine effectiveness of BMPs in the storm water pollution prevention plan.

TPH: No limit, monitoring required, daily maximum, monitoring frequency is 1/year by grab sample. Basis is best professional judgment using the above documents as references. This parameter is also considered a good indicator of the effectiveness of storm water BMPs to meet the intentions of the storm water pollution prevention plan. TPH is considered a more representative parameter than oil and grease at an outfall such as this one.

Total Suspended Solids: No limit, monitoring required, daily maximum, monitoring frequency is 1/year by grab sample. Basis is best professional judgment using the above documents as references. This parameter is also considered a good indicator of the effectiveness of storm water BMPs to meet the intentions of the storm water pollution prevention plan.

Dissolved Copper: No limit, monitoring required, frequency of 1/year, grab sample based on BPJ and review of submitted data.

Outfall 011 and 012

These outfalls discharge storm water from regulated industrial activities at the facility. Outfall 011 drains storm water from switchyard areas, coal yard service building, access roads, parking lots and the coal unloading building, among other areas. Outfall 012 drains an area that includes a section of the ash haul road. As the outfalls are storm water outfalls associated with a regulated industrial activity with no retention or treatment, the storm water language and sampling requirements will apply to these outfalls. A review of the data indicates TSS needs to be addressed with improved BMPs, monitoring will remain the same for this permit term.

Agency guidance memoranda 93-010A, dated December 9, 1993, 96-001, dated March 15, 1996 and Agency advice on storm water dated March 29, 1999 all address storm water discharges in VPDES permits and are used as references for determining sampling and reporting requirements for storm water outfalls.

Flow: No limit, monitoring require, daily maximum as MG (volume, not flow), monitoring frequency of 1/year, estimate. Basis is best professional judgment using Agency guidance memoranda 93-010A, dated December 9, 1993, 96-001, dated March 15, 1996 and Agency advice on storm water dated March 29, 1999 as references for determining sampling and reporting requirements.

pH: Limits of NL s.u. minimum, NL s.u. maximum, frequency is 1/year by grab sample. Basis is best professional judgment to determine effectiveness of BMPs in the storm water pollution prevention plan.

TPH: No limit, monitoring required, daily maximum, monitoring frequency is 1/year by grab sample. Basis is best professional judgment using the above documents as references. This parameter is also considered a good indicator of the effectiveness of storm water BMPs to meet the intentions of the storm water pollution prevention plan. TPH is considered a more representative parameter than oil and grease at an outfall such as this one.

Total Suspended Solids: No limit, monitoring required, daily maximum, monitoring frequency is 1/year by grab sample. Basis is best professional judgment using the above documents as references. This parameter is also considered a good indicator of the effectiveness of storm water BMPs to meet the intentions of the storm water pollution prevention plan. See data included in this Attachment.

Outfall 101

This outfall is the discharge from the ash finger ponds. This is an internal outfall to the discharge canal and subsequently to outfalls 001 and 002. The following sources contribute, in part, to the flows to the ash ponds: boiler blowdown, surge tank overflow, pyrite hydrobin overflow, unit 3 boiler seal trough, acid and caustic tank dike, demineralizer wastes, low volume wastes, and oil retention pond. These sources are addressed in 40 CFR part 423 for the Steam Electric Power Generating Point Source Category.

Limits based on Federal Effluent Guidelines or water quality will be placed on this internal outfall, and not on outfalls 001 and 002. Federal regulations allow for placing limits on internal outfalls where limits on the external outfalls are impractical due to sampling restraints or problems with dilution at the external outfalls. Due to the large flows and numerous contributions to the external outfalls, it is more practical to assign necessary limitations to the internal outfalls. Therefore, certain effluent limits are placed on this internal outfall instead of the external outfalls where the limits are warranted based on data or requirements specific to this internal outfall.

Monitoring frequencies in the previous permit have been reviewed and will remain the same in the reissued permit.

Flow: No limit, monitoring required, monthly average and daily maximum, monitoring frequency is 1/month by estimate. This is based on best professional judgment and is typical for industrial facilities.

pH is not monitored at this outfall, as it is limited on the external outfall.

Total Suspended Solids: 30 mg/l monthly average, 100 mg/l daily maximum; monitoring frequency of 1/month, by grab sample. Basis is Section 423 of the 40 CFR, Federal Effluent Guidelines for the Steam Electric Power Generating Point Source Category.

Oil and Grease: 15 mg/l monthly average, 20 mg/l daily maximum; monitoring frequency of 1/month, by grab sample. Basis is Section 423 of the 40 CFR, Federal Effluent Guidelines for the Steam Electric Power Generating Point Source Category.

Enterococci: No limit, monitoring only, monitoring frequency is 1/year by grab sample. Basis is best professional judgment. The permittee had previously reported fecal coliform was present in the discharge. The permittee conducted a fecal coliform study to determine if the bacterial contamination in the discharge was from human sources. The study did appear to lend substantial evidence that the bacteria component of the discharge was not from human sources. Since that time, the DEQ has adopted new water quality standards for e.coli and enterococci in place of fecal coliform. To ensure that the study was correct in the conclusion that the bacterial component in the discharge was not from human sources and to ensure we were protecting against the new bacterial standards, annual enterococci monitoring was included in the permit for the last reissuance. The monitoring data submitted that human bacterial contributions are present in the discharge; therefore this requirement will remain in the permit, see data attached. No changes will be made at this reissuance.

Outfall 102

This outfall is the discharge from the metals cleaning waste pond. This is an internal outfall to the discharge canal and subsequently to outfalls 001 and 002. The following sources contribute flows to the metals cleaning waste pond: fly ash leachate tank, units 1, 2, 3 ESP wash, air pre-heater wash, units 1, 2, 3 boiler wash, units 1,2,3 ductwork wash, turbine wash. These sources are addressed in 40 CFR part 423 for the Steam Electric Power Generating Point Source Category.

Limits based on Federal Effluent Guidelines or water quality will be placed on this internal outfall, and not on outfalls 001 and 002. Federal regulations require numerical limitations for copper, iron, TSS and oil and grease on metals cleaning discharges(s) for this industrial category.

Flow: No limit, monitoring required, monthly average and daily maximum, measured. This is based on best professional judgment and is typical for industrial facilities.

pH is not monitored at this outfall, as it is limited on the external outfall.

Total Suspended Solids: 30 mg/l and 175 lb/day monthly average, 100 mg/l and 584 lb/day daily maximum, by grab sample. Basis is Section 423 of the 40 CFR, Federal Effluent Guidelines for the Steam Electric Power Generating Point Source Category. Mass limits are the same as in the previous permit. This is based on BPJ. The permittee has previously stated that the permittee artificially maintains a lower flow and increases the discharge period at outfall 002 specifically to insure they meet mass limitations. The long term average flow reported on the application for reissuance is not the true average flow for the outfall. It would not have been appropriate to use this reported flow, as it would have made the limitations more stringent where, in this case, the flow has not actually decreased through the process or through the outfall, and, therefore, the limits should not be made more stringent.

Oil and Grease: 15 mg/l and 88 lb/day monthly average, 20 mg/l and 117 lb/day daily maximum, by grab sample. Basis is Section 423 of the 40 CFR, Federal Effluent Guidelines for the Steam Electric Power Generating Point Source Category. Mass limits are the same as in the previous permit. This is based on BPJ. The permittee has previously stated that the permittee artificially maintains a lower flow and increases the discharge period at outfall 002 specifically to insure they meet mass limitations. The long term average flow reported on the application for reissuance is not the true average flow for the outfall. It would not have been appropriate to use this reported flow, as it would have made the limitations more stringent where, in this case, the flow has not actually decreased through the process or through the outfall, and, therefore, the limits should not be made more stringent.

Total Copper: 1000 ug/l and 6 lb/day monthly average and daily maximum, monitoring frequency is 1/discharge, by grab sample. Basis is Section 423 of the 40 CFR, Federal Effluent Guidelines for the Steam Electric Power Generating Point Source Category. Data submitted on the DMR's for total copper indicated that copper was detected at concentrations up to 150 ug/l. However, copper was not

detected at elevated concentrations at the external outfall. Therefore, no limits other than the limits required by the guidelines are necessary. Mass limits are the same as in the previous permit. This is based on BPJ. The permittee has previously stated that the permittee artificially maintains a lower flow and increases the discharge period at outfall 002 specifically to insure they meet mass limitations. The long term average flow reported on the application for reissuance is not the true average flow for the outfall. It would not have been appropriate to use this reported flow, as it would have made the limitations more stringent where, in this case, the flow has not actually decreased through the process or through the outfall, and, therefore, the limits should not be made more stringent.

Total Iron: 1000 ug/l and 6 lb/day monthly average and daily maximum, by grab sample. Basis is Section 423 of the 40 CFR, Federal Effluent Guidelines for the Steam Electric Power Generating Point Source Category. Mass limits are the same as in the previous permit. This is based on BPJ. The permittee has previously stated that the permittee artificially maintains a lower flow and increases the discharge period at outfall 002 specifically to insure they meet mass limitations. The long term average flow reported on the application for reissuance is not the true average flow for the outfall. It would not have been appropriate to use this reported flow, as it would have made the limitations more stringent where, in this case, the flow has not actually decreased through the process or through the outfall, and, therefore, the limits should not be made more stringent.

Outfall 103

This outfall discharges runoff from the coal pile at the facility. This is an internal outfall to the discharge canal and subsequently to outfalls 001 and 002. This discharge is specifically addressed in 40 CFR part 423 for the Steam Electric Power Generating Point Source Category.

Limits based on Federal Effluent Guidelines or water quality will be placed on this internal outfall, and not on outfalls 001 and 002. Federal regulations require numerical limitations for TSS on coal pile runoff for this industrial category.

Agency guidance memoranda 93-010A, dated December 9, 1993, 96-001, dated March 15, 1996 and Agency advice on storm water dated March 29, 1999 all address storm water discharges in VPDES permits and are used as references for determining sampling and reporting requirements for storm water outfalls. Since this outfall discharges from a holding basin that is manually operated, some of the storm water sampling requirements do not apply, such as reporting flow as MG, the 72-hour, 0.1-inch and the sampling in the first three hour language. This language will not be included in the permit.

Flow: No limit, monitoring require, daily maximum as MGD, monitoring frequency of 1/6 months, estimate.

pH is not monitored at this outfall, as it is limited on the external outfall.

Total Suspended Solids: 50 mg/l daily maximum, monitoring frequency of 1/6 months, by grab sample. Basis is Section 423 of the 40 CFR, Federal Effluent Guidelines for the Steam Electric Power Generating Point Source Category. There is also a statement in the permit that this outfall is not subject to the limit in the event of a runoff associated with a greater than 10-year, 24-hour rain event if that basin is designed and constructed to meet a 10-year, 24-hour rainfall event. This is in accordance with 40 CFR part 423 for coal pile runoff.

Dissolved Copper, Dissolved Nickel, Dissolved Arsenic, Dissolved Zinc: No limit, monitoring required, monitoring frequency is 1/year by grab sample. Basis is best professional judgment. Data submitted on DMR's over the previous permit term indicate these metals present in the discharge from the coal pile runoff in elevated concentrations. Reported concentrations for arsenic exceeded 513 ug/l; reported concentrations for copper exceeded 205 ug/l; reported concentrations for nickel exceeded 811 ug/l; reported concentrations for zinc exceeded 507 ug/l. These concentrations are elevated to the point that there could be some concern, see data in this attachment. Since this is a storm water discharge, the EPA and the State do not typically impose numerical limitations upon these types of discharges. Also, since this is an internal discharge to an external outfall (001 and 002), numerical effluent limitations based on water quality or toxicity screening would not normally be placed on this type of outfall. However, the permittee should examine ways to reduce the concentrations of metals from the coal pile runoff. Annual monitoring will remain for this permit term.

Outfall 104

This outfall discharges wastewater from the coal fly ash leachate tank. It is an internal outfall to outfalls 001 and 002. Dissolved copper and dissolved zinc were monitored at this outfall in the previous permit. Data submitted with DMR's over the previous permit term indicate that the discharge is typically routed to the municipal sanitary sewer system and rarely discharges. Therefore, there are little data results to evaluate. Because of that, monitoring requirements will remain the same in the

reissued permit. In order to keep the ability to discharge through this permit, the outfall must remain in the permit.

Flow: No limit, monitoring required, monthly average and daily maximum, monitoring frequency is 1/month by estimate. This is based on best professional judgment and is typical for industrial facilities.

pH is not monitored at this outfall, as it is limited on the external outfall.

Dissolved Copper: No limit, monitoring required, daily maximum, monitoring frequency is 1/year. It is believed that one sample per year of copper in the dissolved form will be sufficient to determine if any controls on copper may be necessary.

Dissolved Zinc: No limit, monitoring required, daily maximum, monitoring frequency is 1/year. It is believed that one sample per year of zinc in the dissolved form will be sufficient to determine if any additional controls on zinc may be necessary.

Outfalls 106, 107, 108, 109, 110, and 015

These outfalls discharge storm water associated with regulated industrial activities. Agency guidance memoranda 93-010A, dated December 9, 1993, 96-001, dated March 15, 1996 and Agency advice on storm water dated March 29, 1999 all address storm water discharges in VPDES permits and are used as references for determining sampling and reporting requirements for storm water outfalls. In accordance with these documents, no monitoring or reporting will be required. Discharges of process wastewater will be specifically prohibited in the permit from these outfalls, as recommended in the DEQ VPDES Permit Manual.

Note: Monitoring for TSS, dissolved copper and dissolved zinc did apply to Outfalls 106, 107, 108, and 110 in previous permit issuances. Monitoring for these parameters has been moved to the external outfall 002 at this reissuance.

Outfall 111

This outfall contains discharge from the intake screen wash, and is an internal discharge to outfall 002. The permit will specifically prohibit the discharge of process wastewater from this outfall, and there will be no monitoring or reporting required. There is a special condition in the permit further addressing screen washing. Basis is best professional judgment, similar to the way other discharges similar in nature are addressed. This is similar to the way screen washing was addressed in the VPDES permit for the Chesapeake Energy center.

Dominion - Yorktown Power Station
DMR Data 2009 - 2012

Permit No: VA0004103 | Facility Name: Dominion - Yorktown Power Station | Outfall No: 010 | Parameter Code: 442 | Parameter Description: COPPER, DISSOLVED (UG/L AS CU)

	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX	Reporting Frequency	Monitoring Start Date	Monitoring End Date
1	NULL	NULL	NULL	NULL	<QL	Annual	01-JAN-2009	31-DEC-2009
2	NULL	NULL	NULL	NULL	<QL	Annual	01-JAN-2010	31-DEC-2010
3	NULL	NULL	NULL	NULL	<QL	Annual	01-JAN-2011	31-DEC-2011

Dominion - Yorktown Power Station
DMR Data 2009 - 2012

Permit No: VA0004103 | Facility Name: Dominion - Yorktown Power Station | Outfall No: 011 | Parameter Code: 004 | Parameter Description: TSS

	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX	Reporting Frequency	Monitoring Start Date	Monitoring End Date
1	NULL	NULL	NULL	NULL	71.8	Annual	01-JAN-2009	31-DEC-2009
2	NULL	NULL	NULL	NULL	15.7	Annual	01-JAN-2010	31-DEC-2010
3	NULL	NULL	NULL	NULL	24.6	Annual	01-JAN-2011	31-DEC-2011

Dominion - Yorktown Power Station
DMR Data 2009 - 2012

Permit No: VA0004103 | Facility Name: Dominion - Yorktown Power Station | Outfall No: 012 | Parameter Code: 004 | Parameter Description: TSS

	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX	Reporting Frequency	Monitoring Start Date	Monitoring End Date
1	NULL	NULL	NULL	NULL	23.7	Annual	01-JAN-2009	31-DEC-2009
2	NULL	NULL	NULL	NULL	38.1	Annual	01-JAN-2010	31-DEC-2010
3	NULL	NULL	NULL	NULL	11.8	Annual	01-JAN-2011	31-DEC-2011

Dominion - Yorktown Power Station
DMR Data 2009 - 2012

Permit No: VA0004103 | Facility Name: Dominion - Yorktown Power Station | Outfall No: 008

	Parameter Code	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX	Monitoring Start Date	Monitoring End Date	Reporting Frequency
1	257	PETROLEUM HYDROCARBONS, TOTAL RECOVERABLE	NULL	NULL	NULL	NULL	<QL	01-JAN-2009	31-DEC-2009	Annual
2	012	PHOSPHORUS, TOTAL (AS P)	NULL	NULL	NULL	0.09	NULL	01-JAN-2009	31-DEC-2009	Annual
3	004	TSS	NULL	NULL	NULL	NULL	52.3	01-JAN-2009	31-DEC-2009	Annual
4	002	PH	NULL	NULL	8.09	NULL	8.09	01-JAN-2009	31-DEC-2009	Annual
5	445	NICKEL, DISSOLVED (UG/L AS NI)	NULL	NULL	NULL	NULL	<QL	01-JUL-2009	30-SEP-2009	Quarter
6	448	ZINC, DISSOLVED (AS ZN) (UG/L)	NULL	NULL	NULL	NULL	301	01-JUL-2009	30-SEP-2009	Quarter
7	001	FLOW	0.23	0.23	NULL	NULL	NULL	01-JUL-2009	30-SEP-2009	Quarter
8	442	COPPER, DISSOLVED (UG/L AS CU)	NULL	NULL	NULL	NULL	<QL	01-JUL-2009	30-SEP-2009	Quarter
9	442	COPPER, DISSOLVED (UG/L AS CU)	NULL	NULL	NULL	NULL	14	01-OCT-2009	31-DEC-2009	Quarter
10	445	NICKEL, DISSOLVED (UG/L AS NI)	NULL	NULL	NULL	NULL	<QL	01-OCT-2009	31-DEC-2009	Quarter
11	448	ZINC, DISSOLVED (AS ZN) (UG/L)	NULL	NULL	NULL	NULL	285	01-OCT-2009	31-DEC-2009	Quarter
12	001	FLOW	0.14	0.14	NULL	NULL	NULL	01-OCT-2009	31-DEC-2009	Quarter
13	448	ZINC, DISSOLVED (AS ZN) (UG/L)	NULL	NULL	NULL	NULL	1310	01-JAN-2010	31-MAR-2010	Quarter
14	001	FLOW	0.07	0.07	NULL	NULL	NULL	01-JAN-2010	31-MAR-2010	Quarter
15	445	NICKEL, DISSOLVED (UG/L AS NI)	NULL	NULL	NULL	NULL	<QL	01-JAN-2010	31-MAR-2010	Quarter
16	442	COPPER, DISSOLVED (UG/L AS CU)	NULL	NULL	NULL	NULL	10	01-JAN-2010	31-MAR-2010	Quarter
17	257	PETROLEUM HYDROCARBONS, TOTAL RECOVERABLE	NULL	NULL	NULL	NULL	<QL	01-JAN-2010	31-DEC-2010	Annual
18	012	PHOSPHORUS, TOTAL (AS P)	NULL	NULL	NULL	0.08	NULL	01-JAN-2010	31-DEC-2010	Annual
19	004	TSS	NULL	NULL	NULL	NULL	32.3	01-JAN-2010	31-DEC-2010	Annual
20	002	PH	NULL	NULL	7.57	NULL	7.57	01-JAN-2010	31-DEC-2010	Annual
21	442	COPPER, DISSOLVED (UG/L AS CU)	NULL	NULL	NULL	NULL	8	01-APR-2010	30-JUN-2010	Quarter
22	445	NICKEL, DISSOLVED (UG/L AS NI)	NULL	NULL	NULL	NULL	64	01-APR-2010	30-JUN-2010	Quarter
23	448	ZINC, DISSOLVED (AS ZN) (UG/L)	NULL	NULL	NULL	NULL	1850	01-APR-2010	30-JUN-2010	Quarter
24	001	FLOW	0.04	0.04	NULL	NULL	NULL	01-APR-2010	30-JUN-2010	Quarter
25	001	FLOW	0.03	0.03	NULL	NULL	NULL	01-JUL-2010	30-SEP-2010	Quarter
26	448	ZINC, DISSOLVED (AS ZN) (UG/L)	NULL	NULL	NULL	NULL	89	01-JUL-2010	30-SEP-2010	Quarter
27	445	NICKEL, DISSOLVED (UG/L AS NI)	NULL	NULL	NULL	NULL	<QL	01-JUL-2010	30-SEP-2010	Quarter
28	442	COPPER, DISSOLVED (UG/L AS CU)	NULL	NULL	NULL	NULL	8	01-JUL-2010	30-SEP-2010	Quarter
29	442	COPPER, DISSOLVED (UG/L AS CU)	NULL	NULL	NULL	NULL	<QL	01-OCT-2010	31-DEC-2010	Quarter
	445	NICKEL,	NULL	NULL	NULL	NULL	<QL	01-OCT-2010	31-DEC-2010	Quarter

30		DISSOLVED (UG/L AS NI)								
31	448	ZINC, DISSOLVED (AS ZN) (UG/L)	NULL	NULL	NULL	NULL	<QL	01-OCT-2010	31-DEC-2010	Quarter
32	001	FLOW	0.05	0.05	NULL	NULL	NULL	01-OCT-2010	31-DEC-2010	Quarter
33	445	NICKEL, DISSOLVED (UG/L AS NI)	NULL	NULL	NULL	NULL	<QL	01-JAN-2011	31-MAR-2011	Quarter
34	442	COPPER, DISSOLVED (UG/L AS CU)	NULL	NULL	NULL	NULL	<QL	01-JAN-2011	31-MAR-2011	Quarter
35	448	ZINC, DISSOLVED (AS ZN) (UG/L)	NULL	NULL	NULL	NULL	108	01-JAN-2011	31-MAR-2011	Quarter
36	001	FLOW	0.053	0.094	NULL	NULL	NULL	01-JAN-2011	31-MAR-2011	Quarter
37	002	PH	NULL	NULL	6.91	NULL	7.59	01-JAN-2011	31-DEC-2011	Annual
38	257	PETROLEUM HYDROCARBONS, TOTAL RECOVERABLE	NULL	NULL	NULL	NULL	<QL	01-JAN-2011	31-DEC-2011	Annual
39	012	PHOSPHORUS, TOTAL (AS P)	NULL	NULL	NULL	<0.05	NULL	01-JAN-2011	31-DEC-2011	Annual
40	004	TSS	NULL	NULL	NULL	NULL	24.6	01-JAN-2011	31-DEC-2011	Annual
41	001	FLOW	0.05	0.05	NULL	NULL	NULL	01-APR-2011	30-JUN-2011	Quarter
42	445	NICKEL, DISSOLVED (UG/L AS NI)	NULL	NULL	NULL	NULL	<QL	01-APR-2011	30-JUN-2011	Quarter
43	442	COPPER, DISSOLVED (UG/L AS CU)	NULL	NULL	NULL	NULL	57	01-APR-2011	30-JUN-2011	Quarter
44	448	ZINC, DISSOLVED (AS ZN) (UG/L)	NULL	NULL	NULL	NULL	513	01-APR-2011	30-JUN-2011	Quarter
45	001	FLOW	0.02	0.02	NULL	NULL	NULL	01-JUL-2011	30-SEP-2011	Quarter
46	445	NICKEL, DISSOLVED (UG/L AS NI)	NULL	NULL	NULL	NULL	<QL	01-JUL-2011	30-SEP-2011	Quarter
47	448	ZINC, DISSOLVED (AS ZN) (UG/L)	NULL	NULL	NULL	NULL	110	01-JUL-2011	30-SEP-2011	Quarter
48	442	COPPER, DISSOLVED (UG/L AS CU)	NULL	NULL	NULL	NULL	34	01-JUL-2011	30-SEP-2011	Quarter
49	442	COPPER, DISSOLVED (UG/L AS CU)	NULL	NULL	NULL	NULL	<QL	01-OCT-2011	31-DEC-2011	Quarter
50	448	ZINC, DISSOLVED (AS ZN) (UG/L)	NULL	NULL	NULL	NULL	79	01-OCT-2011	31-DEC-2011	Quarter
51	001	FLOW	0.02	0.02	NULL	NULL	NULL	01-OCT-2011	31-DEC-2011	Quarter
52	445	NICKEL, DISSOLVED (UG/L AS NI)	NULL	NULL	NULL	NULL	<QL	01-OCT-2011	31-DEC-2011	Quarter
53	001	FLOW	0.05	0.05	NULL	NULL	NULL	01-JAN-2012	31-MAR-2012	Quarter
54	445	NICKEL, DISSOLVED (UG/L AS NI)	NULL	NULL	NULL	NULL	<QL	01-JAN-2012	31-MAR-2012	Quarter
55	442	COPPER, DISSOLVED (UG/L AS CU)	NULL	NULL	NULL	NULL	<QL	01-JAN-2012	31-MAR-2012	Quarter
56	448	ZINC, DISSOLVED (AS ZN) (UG/L)	NULL	NULL	NULL	NULL	<QL	01-JAN-2012	31-MAR-2012	Quarter

Dominion - Yorktown Power Station
DMR Data 2009 - 2012

Permit No: VA0004103 | Facility Name: Dominion - Yorktown Power Station | Outfall No: 103

	Parameter Code	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX	Monitoring Start Date	Monitoring End Date	Reporting Frequency
1	445	NICKEL, DISSOLVED (UG/L AS NI)	NULL	NULL	NULL	NULL	8110	01-JAN-2009	31-DEC-2009	Annual
2	438	ARSENIC, DISSOLVED (UG/L AS AS)	NULL	NULL	NULL	NULL	650	01-JAN-2009	31-DEC-2009	Annual
3	448	ZINC, DISSOLVED (AS ZN) (UG/L)	NULL	NULL	NULL	NULL	5070	01-JAN-2009	31-DEC-2009	Annual
4	442	COPPER, DISSOLVED (UG/L AS CU)	NULL	NULL	NULL	NULL	2050	01-JAN-2009	31-DEC-2009	Annual
5	001	FLOW	NULL	1.613	NULL	NULL	NULL	01-JUL-2009	31-DEC-2009	Semi Annual
6	004	TSS	NULL	NULL	NULL	NULL	10.3	01-JUL-2009	31-DEC-2009	Semi Annual
7	004	TSS	NULL	NULL	NULL	NULL	14.6	01-JAN-2010	30-JUN-2010	Semi Annual
8	001	FLOW	NULL	1.1613	NULL	NULL	NULL	01-JAN-2010	30-JUN-2010	Semi Annual
9	442	COPPER, DISSOLVED (UG/L AS CU)	NULL	NULL	NULL	NULL	2300.0	01-JAN-2010	31-DEC-2010	Annual
10	445	NICKEL, DISSOLVED (UG/L AS NI)	NULL	NULL	NULL	NULL	9300.0	01-JAN-2010	31-DEC-2010	Annual
11	438	ARSENIC, DISSOLVED (UG/L AS AS)	NULL	NULL	NULL	NULL	513.0	01-JAN-2010	31-DEC-2010	Annual
12	448	ZINC, DISSOLVED (AS ZN) (UG/L)	NULL	NULL	NULL	NULL	5420.0	01-JAN-2010	31-DEC-2010	Annual
13	001	FLOW	NULL	1.613	NULL	NULL	NULL	01-JUL-2010	31-DEC-2010	Semi Annual
14	004	TSS	NULL	NULL	NULL	NULL	3.4	01-JUL-2010	31-DEC-2010	Semi Annual
15	001	FLOW	NULL	1.613	NULL	NULL	NULL	01-JAN-2011	30-JUN-2011	Semi Annual
16	004	TSS	NULL	NULL	NULL	NULL	17.6	01-JAN-2011	30-JUN-2011	Semi Annual
17	448	ZINC, DISSOLVED (AS ZN) (UG/L)	NULL	NULL	NULL	NULL	7304.0	01-JAN-2011	31-DEC-2011	Annual
18	438	ARSENIC, DISSOLVED (UG/L AS AS)	NULL	NULL	NULL	NULL	1399.0	01-JAN-2011	31-DEC-2011	Annual
19	445	NICKEL, DISSOLVED (UG/L AS NI)	NULL	NULL	NULL	NULL	9540.0	01-JAN-2011	31-DEC-2011	Annual
20	442	COPPER, DISSOLVED (UG/L AS CU)	NULL	NULL	NULL	NULL	3050.0	01-JAN-2011	31-DEC-2011	Annual
21	001	FLOW	NULL	1.613	NULL	NULL	NULL	01-JUL-2011	31-DEC-2011	Semi Annual
22	004	TSS	NULL	NULL	NULL	NULL	5.9	01-JUL-2011	31-DEC-2011	Semi Annual

Dominion - Yorktown Power Station
DMR Data 2009 - 2012

Permit No: VA0004103 | Facility Name: Dominion - Yorktown Power Station | Outfall No: 101 | Parameter Code: 140 | Parameter Description: ENTEROCOCCI

	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX	Reporting Frequency	Monitoring Start Date	Monitoring End Date
1	NULL	NULL	NULL	NULL	19	Annual	01-JAN-2009	31-DEC-2009
2	NULL	NULL	NULL	NULL	1	Annual	01-JAN-2010	31-DEC-2010
3	NULL	NULL	NULL	NULL	12	Annual	01-JAN-2011	31-DEC-2011

In addition to the definitions set forth in 40 CFR part 401, the following definitions apply to this part:

(a) The term *total residual chlorine* (or total residual oxidants for intake water with bromides) means the value obtained using the amperometric method for total residual chlorine described in 40 CFR part 136.

(b) The term *low volume waste sources* means, taken collectively as if from one source, wastewater from all sources except those for which specific limitations are otherwise established in this part. Low volume wastes sources include, but are not limited to: wastewaters from wet scrubber air pollution control systems, ion exchange water treatment system, water treatment evaporator blowdown, laboratory and sampling streams, boiler blowdown, floor drains, cooling tower basin cleaning wastes, and recirculating house service water systems. Sanitary and air conditioning wastes are not included.

(c) The term *chemical metal cleaning waste* means any wastewater resulting from the cleaning of any metal process equipment with chemical compounds, including, but not limited to, boiler tube cleaning.

(d) The term *metal cleaning waste* means any wastewater resulting from cleaning [with or without chemical cleaning compounds] any metal process equipment including, but not limited to, boiler tube cleaning, boiler fireside cleaning, and air preheater cleaning.

(e) The term *fly ash* means the ash that is carried out of the furnace by the gas stream and collected by mechanical precipitators, electrostatic precipitators, and/or fabric filters. Economizer ash is included when it is collected with fly ash.

(f) The term *bottom ash* means the ash that drops out of the furnace gas stream in the furnace and in the economizer sections. Economizer ash is included when it is collected with bottom ash.

(g) The term *once through cooling water* means water passed through the main cooling condensers in one or two passes for the purpose of removing waste heat.

(h) The term *recirculated cooling water* means water which is passed through the main condensers for the purpose of removing waste heat, passed through a cooling device for the purpose of removing such heat from the water and then passed again, except for blowdown, through the main condenser.

(i) The term *10 year, 24/hour rainfall event* means a rainfall event with a probable recurrence interval of once in ten years as defined by the National Weather Service in Technical Paper No. 40. *Rainfall Frequency Atlas of the United States,* May 1961 or equivalent regional rainfall probability information developed therefrom.

(j) The term *blowdown* means the minimum discharge of recirculating water for the purpose of discharging materials contained in the water, the further buildup of which would cause concentration in amounts exceeding limits established by best engineering practices.

(k) The term *average concentration* as it relates to chlorine discharge means the average of analyses made over a single period of chlorine release which does not exceed two hours.

(l) The term *free available chlorine* shall mean the value obtained using the amperometric titration method for free available chlorine described in *Standard Methods for the Examination of Water and Wastewater,* page 112 (13th edition).

(m) The term *coal pile runoff* means the rainfall runoff from or through any coal storage pile.

§ 423.12 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

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(a) In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, utilization of

facilities, raw materials, manufacturing processes, non-water quality environmental impacts, control and treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES Permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations. The phrase "other such factors" appearing above may include significant cost differentials. In no event may a discharger's impact on receiving water quality be considered as a factor under this paragraph.

(b) Any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction by the application of the best practicable control technology currently available (BPT):

(1) The pH of all discharges, except once through cooling water, shall be within the range of 6.0–9.0.

(2) There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

(3) The quantity of pollutants discharged from low volume waste sources shall not exceed the quantity determined by multiplying the flow of low volume waste sources times the concentration lised in the following table:

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day (mg/l)	Average of daily values for 30 consecutive days shall not exceed (mg/l)
TSS	100.0	30.0
Oil and grease	20.0	15.0

(4) The quantity of pollutants discharged in fly ash and bottom ash transport water shall not exceed the quantity determined by multiplying the flow of fly ash and bottom ash transport water times the concentration listed in the following table:

	BPT effluent limitations

Pollutant or pollutant property	Maximum for any 1 day (mg/l)	Average of daily values for 30 consecutive days shall not exceed (mg/l)
TSS	100.0	30.0
Oil and grease	20.0	15.0

(5) The quantity of pollutants discharged in metal cleaning wastes shall not exceed the quantity determined by multiplying the flow of metal cleaning wastes times the concentration listed in the following table:

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day (mg/l)	Average of daily values for 30 consecutive days shall not exceed (mg/l)
TSS	100.0	30.0
Oil and grease	20.0	15.0
Copper, total	1.0	1.0
Iron, total	1.0	1.0

(6) The quantity of pollutants discharged in once through cooling water shall not exceed the quantity determined by multiplying the flow of once through cooling water sources times the concentation listed in the following table:

Pollutant or pollutant property	BPT effluent limitations	
	Maximum concentration (mg/l)	Average concentration (mg/l)
Free available chlorine	0.5	0.2

(7) The quantity of pollutants discharged in cooling tower blowdown shall not exceed the quantity determined by multiplying the flow of cooling tower blowdown sources times the concentration listed in the following table:

Pollutant or pollutant property	BPT effluent limitations	
	Maximum concentration (mg/l)	Average concentration (mg/l)
Free available chlorine	0.5	0.2

(8) Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available or total residual chlorine at any one time unless the utility can demonstrate to the Regional Administrator or State, if the State has NPDES permit issuing authority, that the units in a particular location cannot operate at or below this level or chlorination.

(9) Subject to the provisions of paragraph (b)(10) of this section, the following effluent limitations shall apply to the point source discharges of coal pile runoff:

Pollutant or pollutant property	BPT effluent limitations
	Maximum concentration for any time (mg/l)
TSS	50

(10) Any untreated overflow from facilities designed, constructed, and operated to treat the volume of coal pile runoff which is associated with a 10 year, 24 hour rainfall event shall not be subject to the limitations in paragraph (b)(9) of this section.

(11) At the permitting authority's discretion, the quantity of pollutant allowed to be discharged may be expressed as a concentration limitation instead of the mass based limitations specified in paragraphs (b)(3) through (7) of this section. Concentration limitations shall be those concentrations specified in this section.

(12) In the event that waste streams from various sources are combined for treatment or discharge, the quantity of each pollutant or pollutant property controlled in paragraphs (b)(1) through (11) of this section attributable to each controlled waste source shall not

exceed the specified limitations for that waste source.

(The information collection requirements contained in paragraph (a) were approved by the Office of Management and Budget under control number 2000–0194)

[47 FR 52304, Nov. 19, 1982, as amended at 48 FR 31404, July 8, 1983]

§ 423.13 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

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Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this part must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

(a) There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

(b)(1) For any plant with a total rated electric generating capacity of 25 or more megawatts, the quantity of pollutants discharged in once through cooling water from each discharge point shall not exceed the quantity determined by multiplying the flow of once through cooling water from each discharge point times the concentration listed in the following table:

Pollutant or pollutant property	BAT Effluent Limitations
	Maximum concentration (mg/l)
Total residual chlorine	0.20

(2) Total residual chlorine may not be discharged from any single generating unit for more than two hours per day unless the discharger demonstrates to the permitting authority that discharge for more than two hours is required for macroinvertebrate control. Simultaneous multi-unit chlorination is permitted.

(c)(1) For any plant with a total rated generating capacity of less than 25 megawatts, the quantity of pollutants discharged in once through cooling water shall not exceed the quantity determined by multiplying the flow of once through cooling water sources times the concentration listed in the following table:

Pollutant or pollutant property	BAT effluent limitations	
	Maximum concentration (mg/l)	Average concentration (mg/l)
Free available chlorine.....	0.5	0.2

(2) Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available or total residual chlorine at any one time unless the utility can demonstrate to the Regional Administrator or State, if the State has NPDES permit issuing authority, that the units in a particular location cannot operate at or below this level of chlorination.

(d)(1) The quantity of pollutants discharged in cooling tower blowdown shall not exceed the quantity determined by multiplying the flow of cooling tower blowdown times the concentration listed below:

Pollutant or pollutant property	BAT effluent limitations	
	Maximum concentration (mg/l)	Average concentration (mg/l)
Free available chlorine.....	0.5	0.2

Pollutant or pollutant property	Maximum for any 1 day - (mg/l)	Average of daily values for 30 consecutive days shall not exceed = (mg/l)
The 126 priority pollutants (Appendix A) contained in chemicals added for cooling tower maintenance, except:	(\1\)	(\1\)
Chromium, total.....	0.2	0.2
Zinc, total.....	1.0	1.0

\1\ No detectable amount.

(2) Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available or total residual chlorine at any one time unless the utility can demonstrate to the Regional Administrator or State, if the State has NPDES permit issuing authority, that the units in a particular location cannot operate at or below this level of chlorination.

(3) At the permitting authority's discretion, instead of the monitoring specified in 40 CFR 122.11(b) compliance with the limitations for the 126 priority pollutants in paragraph (d)(1) of this section may be determined by engineering calculations which demonstrate that the regulated pollutants are not detectable in the final discharge by the analytical methods in 40 CFR part 136.

(e) The quantity of pollutants discharged in chemical metal cleaning wastes shall not exceed the quantity determined by multiplying the flow of chemical metal cleaning wastes times the concentration listed in the following table:

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day (mg/l)	Average of daily values for 30 consecutive days shall not exceed (mg/l)
Copper, total	1.0	1.0
Iron, total	1.0	1.0

(f) [Reserved—Nonchemical Metal Cleaning Wastes].

(g) At the permitting authority's discretion, the quantity of pollutant allowed to be discharged may be expressed as a concentration limitation instead of the mass based limitations specified in paragraphs (b) through (e) of this section. Concentration limitations shall be those concentrations specified in this section.

(h) In the event that waste streams from various sources are combined for treatment or discharge, the quantity of each pollutant or pollutant property controlled in paragraphs (a) through (g) of this section attributable to each controlled waste source shall not exceed the specified limitation for that waste source.

(The information collection requirements contained in paragraphs (c)(2) and (d)(2) were approved by the Office of Management and Budget under control number 2040–0040. The information collection requirements contained in paragraph (d)(3) were approved under control number 2040–0033.)

[47 FR 52304, Nov. 19, 1982, as amended at 48 FR 31404, July 8, 1983]

§ 423.14 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

top

§ 423.15 New source performance standards (NSPS).

top

Any new source subject to this subpart must achieve the following new source performance standards:

(a) The pH of all discharges, except once through cooling water, shall be within the range of 6.0–9.0.

(b) There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

(c) The quantity of pollutants discharged from low volume waste sources shall not exceed the quantity determined by multiplying the flow of low volume waste sources times the concentration listed in the following table:

Pollutant or pollutant property	NSPS effluent limitations	
	Maximum for any 1 day (mg/l)	Average of daily values for 30 consecutive days shall not exceed (mg/l)
TSS	100.0	30.0
Oil and grease	20.0	15.0

(d) The quantity of pollutants discharged in chemical metal cleaning wastes shall not exceed the quantity determined by multiplying the flow of chemical metal cleaning wastes times the concentration listed in the following table:

	NSPS effluent limitations

Pollutant or pollutant property	Maximum for any 1 day (mg/l)	Average of daily values for 30 consecutive days shall not exceed (mg/l)
TSS	100.0	30.0
Oil and grease	20.0	15.0
Copper, total	1.0	1.0
Iron, total	1.0	1.0

(e) [Reserved—Nonchemical Metal Cleaning Wastes].

(f) The quantity of pollutants discharged in bottom ash transport water shall not exceed the quantity determined by multiplying the flow of the bottom ash transport water times the concentration listed in the following table:

Pollutant or pollutant property	NSPS effluent limitations	
	Maximum for any 1 day (mg/l)	Average of daily values for 30 consecutive days shall not exceed (mg/l)
TSS	100.0	30.0
Oil and grease	20.0	15.0

(g) There shall be no discharge of wastewater pollutants from fly ash transport water.

(h)(1) For any plant with a total rated electric generating capacity of 25 or more megawatts, the quantity of pollutants discharged in once through cooling water from each discharge point shall not exceed the quantity determined by multiplying the flow of once through cooling water from each discharge point times the concentration listed in the following table:

	NSPS effluent limitations

Pollutant or pollutant property	Maximum concentration (mg/l)
Total residual chlorine.....	0.20

(2) Total residual chlorine may not be discharged from any single generating unit for more than two hours per day unless the discharger demonstrates to the permitting authority that discharge for more than two hours is required for macroinvertebrate control. Simultaneous multi-unit chlorination is permitted.

(i)(1) For any plant with a total rated generating capacity of less than 25 megawatts, the quantity of pollutants discharged in once through cooling water shall not exceed the quantity determined by multiplying the flow of once through cooling water sources times the concentration listed in the following table:

Pollutant of pollutant property	NSPS effluent limitations	
	Maximum concentration (mg/l)	Average concentration (mg/l)
Free available chlorine.....	0.5	0.2

(2) Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available or total residual chlorine at any one time unless the utility can demonstrate to the Regional Administrator or State, if the State has NPDES permit issuing authority, that the units in a particular location cannot operate at or below this level of chlorination.

(j)(1) The quantity of pollutants discharged in cooling tower blowdown shall not exceed the quantity determined by multiplying the flow of cooling tower blowdown times the concentration listed below:

Pollutant or pollutant property	NSPS effluent limitations	
	Maximum concentration (mg/l)	Average concentration (mg/l)
Free available chlorine.....	0.5	0.2

Pollutant or pollutant property	Maximum for any 1 day (mg/l)	Average of daily values for 30 consecutive days shall not exceed (mg/l)
The 126 priority pollutants (Appendix A) contained in chemicals added for cooling tower maintenance, except:	(\1\)	(\1\)
Chromium, total	0.2	0.2
Zinc, total	1.0	1.0

\1\ No detectable amount.

(2) Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available or total residual chlorine at any one time unless the utility can demonstrate to the Regional Administrator or State, if the State has NPDES permit issuing authority, that the units in a particular location cannot operate at or below this level of chlorination.

(3) At the permitting authority's discretion, instead of the monitoring in 40 CFR 122.11 (b), compliance with the limitations for the 126 priority pollutants in paragraph (j)(1) of this section may be determined by engineering calculations which demonstrate that the regulated pollutants are not detectable in the final discharge by the analytical methods in 40 CFR part 136.

(k) Subject to the provisions of §423.15(l), the quantity or quality of pollutants or pollutant parameters discharged in coal pile runoff shall not exceed the limitations specified below:

Pollutant or pollutant property	NSPS effluent limitations for any time
TSS	Not to exceed 50 mg/l.

(l) Any untreated overflow from facilities designed, constructed, and operated to treat the coal pile runoff which results from a 10 year, 24 hour rainfall event shall not be subject to the limitations in §423.15(k).

(m) At the permitting authority's discretion, the quantity of pollutant allowed to be

discharged may be expressed as a concentration limitation instead of the mass based limitation specified in paragraphs (c) through (j) of this section. Concentration limits shall be based on the concentrations specified in this section.

(n) In the event that waste streams from various sources are combined for treatment or discharge, the quantity of each pollutant or pollutant property controlled in paragraphs (a) through (m) of this section attributable to each controlled waste source shall not exceed the specified limitation for that waste source.

(The information collection requirements contained in paragraphs (h)(2), (i)(2), and (j)(2) were approved by the Office of Management and Budget under control number 2040–0040. The information collection requirements contained in paragraph (j)(3) were approved under control number 2040–0033.)

[47 FR 52304, Nov. 19, 1982, as amended at 48 FR 31404, July 8, 1983]

§ 423.16 Pretreatment standards for existing sources (PSES).

top

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources (PSES) by July 1, 1984:

(a) There shall be no discharge of polychlorinated biphenol compounds such as those used for transformer fluid.

(b) The pollutants discharged in chemical metal cleaning wastes shall not exceed the concentration listed in the following table:

Pollutant or pollutant property	PSES pretreatment standards
	Maximum for 1 day (mg/l)
Copper, total	1.0

(c) [Reserved—Nonchemical Metal Cleaning Wastes].

(d)(1) The pollutants discharged in cooling tower blowdown shall not exceed the concentration listed in the following table:

7-10 Route. Harm DLT LAD JBD

6-42

EMORANDUM

State Water Control Board
2111 North Hamilton Street P. O. Box 11143 Richmond, VA. 23230

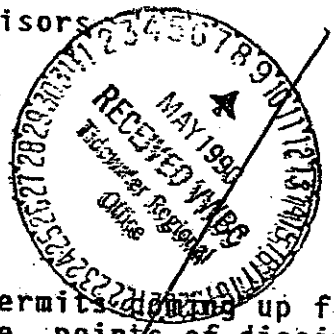
SUBJECT: Steam/Electric Permits

TO: Regulatory Services Supervisors

FROM: Fred Holt - OWRM

DATE: May 3, 1990

COPIES: Permit Staff



Due to several Steam/Electric permits coming up for reissuance throughout the State at the same time, points of dissimilarity in the drafts from region to region have been noted by the permittees and OWRM. The main difference is in application of mass limits. We have taken the March 5, 1985 EPA guidance on mass limits a step further and taken the opportunity to clear up some other permit elements that vary. The memo is to provide some information that may help in drafting these permits.

Steam/Electric technology limits and water quality limits should be put in as appropriate at external outfalls. It may be necessary to apply technology limits at internal outfalls, but technology limits for pH need only be met at the point of discharge. Technology limits for pH are 6 to 9 on all discharges covered by the effluent guidelines except for condenser cooling, and we require water quality pH limits on condenser cooling. Miscellaneous discharges not covered by effluent guidelines should have any appropriate water quality limits. pH should be included on any outfalls where it is expected that it is or might be impacted by facility operations (this will usually be the case). OWRM considers it necessary for condenser cooling water but not for intake screen backwash discharges of river water. For large condenser cooling flows, pH monitoring frequency need not exceed once per month.

Special conditions should include those technology limits prohibiting the discharge of PCB's, prohibiting the discharge of TRC from a single unit for more than two hours, etc., any necessary mixing zone language or the 316(a) "renewal" language if appropriate.

Mass limits for external outfalls are appropriate at ash pond discharges, EPA defined low volume discharges over 0.5 MGD or other discharges that are a major source of pollutants. Mass limits are not necessary for condenser cooling water, low volume discharges under 0.5 MGD, coal pile runoff or other stormwater influenced outfalls.

For internal outfalls, mass limits should be included where the internal outfall is a major source of pollutants (e.g. metal cleaning) discharging to an external outfall where the parameter in question is not mass limited, and the internal outfall is not stormwater influenced.

Mass limits should be applied to nutrient policy limits except for cooling water and stormwater influenced discharges.

Generally, long term average flows are used to calculate mass loadings for technology and conventional limits. Maximum flows are used to calculate water quality toxicity based mass limits. Due to the lack of industry ability to control demand and therefore flow, it is acceptable in determining long term average flows for this industry to use an average of monthly maximum flows rather than the average of monthly averages.

In the case where periodic batch discharges increase flow dramatically for short periods, it may be necessary to provide a separate mass limitation (or separate limitations page) for discharges during the occurrence of the batch discharge. Sometimes this can be handled by applying mass limits at the internal point where the batch discharge occurs rather than at an external outfall where average flows do not account for batch discharges.

It is not necessary to interrupt processing of those permits currently being reissued in order to include all of these elements if it will slow down the reissuance process. Next time the permit is opened or, if it is necessary to make changes to the current draft anyway, they should be included.

mg07/sph

SECTION III-D

SUBJECT: **Mass Limits for Steam Electric Industry**

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION III
6TH AND WALNUT STREETS
PHILADELPHIA, PENNSYLVANIA 19106

In Reply Refer To: 3WM51

March 5, 1985

Mr. William L. Woodfin, Jr.
Director of Operations
Division of Water Resources & Management
Commonwealth of Virginia
State Water Control Board
P.O. Box 11143
Richmond, Virginia 23230

RE: Mass Limits for Steam Electric Industry

Dear Mr. Woodfin:

As requested during our February 22, 1985 conversation, the following is some guidance regarding the imposition of mass limitations at steam electric facilities:

A) Those point sources where mass limitations are usually not warranted:

1. Cooling Water*
   a) once-through
   b) recirculated

*The addition of chlorine for biofouling control is widely practiced and may be of concern on some stream segments.

2. Low Volume Wastes

Restricted to flows under 0.5 mgd including boiler blowdown, waste streams from water treatment and effluent from floor and yard drains.

3. Coal Pile Runoff

B) Those point sources where mass limitations may be warranted:

1. Ash Handling
   - fly ash
   - bottom ash

2. Low Volume Wastes

Flows of 0.5 mgd and over including boiler blowdown, waste streams from water treatment, and effluent from floor and yard drains.

3. Metal Cleaning Wastes

Including wastewater from chemical cleaning of boiler tubes, air preheater washwater, and boiler fireside washwater.

These guidelines are not intended to be applied in all cases but reflect only our experience in dealing with these types of discharges. If you have any questions regarding this matter, please contact Jim Harper at (215) 597-8211.

Sincerely,

Joseph A. Galda, Chief
Water Permits Branch
Water Management Division

ATTACHMENT 7

SPECIAL CONDITIONS RATIONALE

VPDES PERMIT PROGRAM
LIST OF SPECIAL CONDITIONS RATIONALE

Name of Condition:

B. OTHER REQUIREMENTS OR SPECIAL CONDITIONS

1.a. Water Quality Standards Reopener

Rationale: The VPDES Permit Regulation, 9 VAC 25-31-220 D requires effluent limitations to be established which will contribute to the attainment or maintenance of water quality criteria.

1.b. Nutrient Enriched Waters Reopener

Rationale: The Policy for Nutrient Enriched Waters, 9 VAC 25-40 -10 allows reopening of permits for discharges into waters designated as nutrient enriched if total phosphorus and total nitrogen in a discharge potentially exceed specified concentrations. The policy also anticipates that future total phosphorus and total nitrogen limits may be needed.

1.c. Total Maximum Daily Load (TMDL) Reopener

Rationale: For specified waters, Section 303(d) of the Clean Water Act requires the development of total maximum daily loads necessary to achieve the applicable water quality standards. The TMDL must take into account seasonal variations and a margin of safety. In addition, Section 62.1-44.19:7 of the State Water Control Law requires the development and implementation of plans to address impaired waters, including TMDLs. This condition allows for the permit to be either modified or, alternatively, revoked and reissued to incorporate the requirements of a TMDL once it is developed. In addition, the reopener recognizes that, in according to Section 402(o)(1) of the Clean Water Act, limits and/or conditions may be either more or less stringent than those contained in this permit. Specifically, they can be relaxed if they are the result of a TMDL, basin plan or other wasteload allocation prepared under Section 303 of the Act.

2. Licensed Operator Requirement

Rationale: The Permit Regulation, 9 VAC 25-31-200 D and Code of Virginia 54.1-2300 et. seq., Rules and Regulations for Waterworks and Wastewater Works Operators (18 VAC 160-20-10 et seq.) requires licensure of operators.

3. Operations & Maintenance (O & M) Manual

Rationale: The State Water Control Law, Section 62.1-44.21 allows requests for any information necessary to determine the effect of the discharge on State waters. Section 401 of the Clean Water Act requires the permittee to provide opportunity for the state to review the proposed operations of the facility. In addition, 40 CFR 122.41 (e) requires the permittee, at all times, to properly operate and maintain all facilities and systems of treatment and control

(and related appurtenances) in order to achieve compliance with the permit (includes laboratory controls and QA/QC).

4. Notification Levels

Rationale: The VPDES Permit Regulation, 9 VAC 25-31-200 and 40 CFR 122.42 (a) require notification of the discharge of certain parameters at or above specific concentrations for existing manufacturing, commercial mining and silvicultural discharges.

5. Quantification Levels Under Part I.A.

Rationale: States are authorized to establish monitoring methods and procedures to compile and analyze data on water quality, as per 40 CFR part 130, Water Quality Planning and Management, subpart 130.4. Section b. of the special condition defines QL and is included per BPJ to clarify the difference between QL and MDL.

6. Compliance Reporting Under Part I.A.

Rationale: Defines reporting requirements for toxic parameters and some conventional parameters with quantification levels to ensure consistent, accurate reporting on submitted reports.

7. Materials Handling and Storage

Rationale: The VPDES Permit Regulation, 9 VAC 25-31-50 A., prohibits the discharge of any wastes into State waters unless authorized by permit. The State Water Control Law, Sec. 62.1-44.18:2, authorizes the Board to prohibit any waste discharge which would threaten public health or safety, interfere with or be incompatible with treatment works or water use. Section 301 of the Clean Water Act prohibits the discharge of any pollutant unless it complies with specific sections of the Act.

8. Cooling Water and Boiler Additives

Rationale: Chemical additives may be toxic or otherwise violate the receiving stream water quality standards. Upon notification, the regional office can determine if this new additive will warrant a modification to the permit.

9. Screen Washing

Rationale: Best Professional Judgment to address screen cleaning operations at this facility.

10. Section 316(b) Phase II Requirements

Rationale: The facility is required to be in compliance with existing 316(b) regulations. These regulations are scheduled for modification in 2012; at that time the permittee must meet any new requirements in the 316(b) regulation. The permit contains a reopener to allow the regulatory agency to modify the permit to include new 316(b) requirements once the regulation is finalized.

11. Polychlorinated Biphenyl (PCB) Compounds

Rationale: Federal Effluent Guidelines 40 CFR Part 423. The special condition language is as written in the previous permit.

12. Overflow of Untreated Coal Pile Runoff from a 10-Year/24-Hour Storm

Rationale: Federal Effluent Guidelines 40 CFR Part 423. The special condition language is as written in the previous permit.

13. Collected Debris for Trash Intake

Rationale: Best Professional Judgment to prevent collected debris on the intake trash and fish return lines from being returned to the receiving stream.

14. Weir Discharge

Rationale: This condition allows for Virginia Power to discharge a certain amount of cooling water over the weir at outfall 002 instead of through the cooling water discharge pumps in order to balance the intake and discharge flows at the facility. This condition was developed in previous discussions between the Water Control Board and Virginia Power. The condition also provides for sampling and reporting procedures for heat rejection when the weir is used as a discharge point.

15. Mixing Zone Requirements

Rationale: Best Professional Judgment. This special condition and specific language for a mixing zone is based on an agreement between Virginia Power and the State Water Control Board. The agreement was reached some years ago and has been carried forward with this permit after review of the mixing zone boundaries and past data. The current boundaries are sufficient to protect the temperature standard at the mixing zone boundary lines.

16. Total Residual Chlorine Discharge Duration

Rationale: Federal Effluent Guidelines 40CFR Part 423.13 (b)(2).

C. TOXICS MANAGENENT PROGRAM (TMP)

Rationale: To determine the need for pollutant specific and/or whole effluent toxicity limits as may be required by the VPDES Permit Regulation, 9 VAC 25-31-220 D. and 40 CFR 122.44 (d). See Attachment 9 of this fact sheet for additional justification.

D. STORM WATER MANAGEMENT CONDITIONS

1. Sampling Methodology for Specific Outfalls

Rationale: Defines methodology for collecting representative effluent samples in conformance with applicable regulations.

2. Storm Water Management Evaluation

Rationale: The Clean Water Act 402(p) (2) (B) requires permits for storm water discharges associated with industrial activity. VPDES permits for storm water discharges must establish BAT/BCT requirements in accordance with 402(p)(3) of the Act. The Storm Water Pollution Prevention Plan is the vehicle proposed by EPA in the final NPDES General Permits for Storm Water Discharges Associated with Industrial Activity (Federal Register Sept 9, 1992) to meet the requirements of the Act. Additionally, the VPDES Permit Regulation, 9 VAC 25-31-220 K., and 40 CFR 122.44 (k) allow BMPs for the control of toxic pollutants listed in Section 307 (a)(1), and hazardous substances listed in Section 311 of the Clean Water Act where numeric limits are infeasible or BMPs are needed to accomplish the purpose/intent of the law.

Finally, the EPA produced a document dated August 1, 1996, entitled "Interim Permitting Approach for Water Quality- Effluent Limitations in Storm Water Permits". This document indicated that an interim approach to limiting storm water could be through the use of best management practices rather than numerical limits. EPA pointed out that Section 502 of the Clean Water Act (CWA) defined "effluent limitation" to mean "any restriction on quantities, rates, and concentrations of constituents discharged from point sources. The CWA does not say that effluent limitations need be numeric." The use of BMPs falls in line with the Clean Water Act which notes the need to control these discharges to the maximum extent necessary to mitigate impacts on water quality.

3. General Storm Water Conditions

a. Sample Type

Rationale: This stipulates the proper sampling methodology for qualifying rain events from regulated storm water outfalls. Use of this condition is a BPJ determination based on the EPA storm water multi-sector general permit for industrial activities and is consistent with that permit.

b. Recording of Results

Rationale: This sets forth the information which must be recorded and reported for each storm event sampling (ie. date and duration event, rainfall measurement, and duration between qualifying events). It also requires the maintenance of daily rainfall logs which are to be reported. This condition is carried over from the previous storm water pollution prevention plan requirements contained in the EPA storm water baseline industrial general permit.

c. Sampling Waiver

Rationale: This condition allows the permittee to collect substitute samples of qualifying storm events in the event of adverse climatic conditions. Use of this condition is a BPJ determination based on the EPA storm water multi-sector general permit for industrial activities and is consistent with that permit.

d. Representative Discharge

Rationale: This condition allows the permittee to submit the results of sampling from one outfall as representative of other similar outfalls, provided the permittee can demonstrate that the outfalls are substantially identical. Use of this condition is a BPJ determination based on the EPA storm water multi-sector general permit for industrial activities and is consistent with that permit.

e. Quarterly Visual Examination of Storm Water Quality

Rationale: This condition requires that visual examinations of storm water outfalls take place at a specified frequency and sets forth what information needs to be checked and documented. These examinations assist with the evaluation of the pollution prevention plan by providing a simple, low cost means of assessing the quality of storm water discharge with immediate feedback. Use of this condition is a BPJ determination based on the EPA storm water multi-sector general permit for industrial activities and is consistent with that permit.

f. Releases of Hazardous Substances or Oil in Excess of Reportable Quantities

Rationale: This condition requires that the discharge of hazardous substances or oil from a facility be eliminated or minimized in accordance with the facility's storm water pollution prevention plan. If there is a discharge of a material in excess of a reportable quantity, it establishes the reporting requirements in accordance with state laws and federal regulations. In addition, the pollution prevention plan for the facility must be reviewed and revised as necessary to prevent a reoccurrence of the spill. Use of this condition is a BPJ determination based on the EPA storm water multi-sector general permit for industrial activities and is consistent with that permit.

g. Allowable Non-Storm Water Discharges

Rationale: The listed allowable non-storm water discharges are the same as those allowed by the EPA in their multi-sector general permit, and are the same non-storm water discharges allowed under the Virginia General VPDES Permit for Discharges of Storm Water Associated with Industrial Activity, 9 VAC 25-151-10 et seq. Allowing the same non-storm water discharges

in VPDES individual permits provides consistency with other storm water permits for industrial facilities. The non-storm water discharges must meet the conditions in the permit.

4. Storm Water Pollution Prevention Plan

Rationale: The Clean Water Act 402(p) (2) (B) requires permits for storm water discharges associated with industrial activity. VPDES permits for storm water discharges must establish BAT/BCT requirements in accordance with 402(p)(3) of the Act. The Storm Water Pollution Prevention Plan is the vehicle proposed by EPA in the final NPDES General Permits for Storm Water Discharges Associated with Industrial Activity (Federal Register Sept 9, 1992) to meet the requirements of the Act. Additionally, the VPDES Permit Regulation, 9 VAC 25-31-220 K., and 40 CFR 122.44 (k) allow BMPs for the control of toxic pollutants listed in Section 307 (a)(1), and hazardous substances listed in Section 311 of the Clean Water Act where numeric limits are infeasible or BMPs are needed to accomplish the purpose/intent of the law.

5. Facility-specific Storm Water Management Conditions

Rationale: These conditions set forth additional site-specific storm water pollution prevention plan requirements. Use of these conditions is a BPJ determination based on the EPA storm water multi-sector general permit for industrial activities and DEQ's general permit for storm water associated with industrial activities and is consistent with those permits.

ATTACHMENT 8

TOXICS MONITORING/TOXICS REDUCTION/ WET LIMIT RATIONALE

MEMORANDUM

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

TIDEWATER REGIONAL OFFICE

5636 Southern Boulevard Virginia Beach, VA 23462

SUBJECT: TMP language for Dominion Virginia Power Yorktown Plant (VA0004103)

TO: Melinda Woodruff

FROM: Deanna Austin

DATE: 5/17/12

COPIES:

Dominion Virginia Power-Yorktown Plant is located in York County, VA. There are a number of outfalls onsite that required toxicity monitoring during the last permit term and some new monitoring requirements for the reissued permit. Outfalls 001, 002, 008, and 011 discharge to the York River. Outfalls 003 and 004 discharge to an unnamed tributary to Chisman Creek. Outfall 012 discharges to an unnamed tributary to Wormley Creek. The following table documents the discharge sources at each of the toxicity monitored outfalls.

Outfall Number	Discharge Sources
001	Cooling Water Discharge Canal – outfall pumps discharge; including once-through condenser cooling water, and internal outfalls 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 112, 011 (Outfall pumps are located underwater, therefore outfall 002 is sampled for both 001 and 002)
002	Cooling water discharge canal – weir discharge, internal outfalls 111, 202, 203, 204, 205, plus the internal outfalls discharging to outfall 001.
003	Storm water from ash landfill sediment pond #1 (cells 1-6) This includes SW from ash landfill, truckwash wastewater and runoff from dust suppression activities.
004	Storm water from ash landfill sediment pond #2 (cells 7-12)
008	Storm water from Unit 3 stack and ash handling areas (regulated industrial activity)(substantially identical to outfall 014)
011	Storm water from switchyard, security building, coal yard service building, access roads, parking lots, maintenance building for coal yard, coal conveyors, coal shaker building, coal unloading building, fuel pumps(regulated industrial activity)
012	Storm water from area containing a portion of the ash haul road(regulated industrial activity)

During the last permit term outfalls 002, 003, 004, 008, 011 and 012 were sampled. The data collected is presented in the tables below.

OUTFALL	DESCRIPT	SPECIES	SAMPLEDT	LC50	SURVIVAL	NOEC	TU	LAB
002	1st Annual Chronic	A.b.	3/3/08	100	100		1	CBI
002	1st Annual Acute	A.b.	3/5/08	100	100		1	CBI
002	2nd Annual Chronic	A.b.	3/2/09		100	100	1	CBI
002	2nd Annual Acute	A.b.	3/4/09	100	100		1	CBI
002	3rd Annual Chronic	A.b.	3/8/10		100	100	1	CBI
002	3rd Annual Acute	A.b.	3/10/10	100	100		1	CBI
002	4th Annual Chronic	A.b.	8/1/11		100	100	1	CBI
002	4th Annual Acute	A.b.	8/3/11	100	100		1	CBI

A.b. *Americamysis bahia*

OUTFALL	DESCRIPT	SPECIES	SAMPLEDT	LC50	SURVIVAL	NOEC	TU	LAB
003	1st Quarterly Acute	C.d.	3/3/08	100	100		1	CBI
003	2nd Quarterly Acute	C.d.	2/2/09	100	100		1	CBI
003	3rd Quarterly Acute	C.d.	4/1/09	100	100		1	CBI
003	4th Quarterly Acute	C.d.	8/3/09	100	100		1	CBI
003	5th Quarterly Acute	C.d.	10/6/09	100	100		1	CBI
003	6th Quarterly Acute	C.d.	3/8/10	100	100		1	CBI
003	7th Quarterly Acute	C.d.	6/7/10	100	100		1	CBI
003	8th Quarterly Acute	C.d.	9/30/10	100	100		1	CBI
003	9th Quarterly Acute	C.d.	11/9/10	100	100		1	CBI
003	Chronic Test	C.d.	12/5/10		100	100	1	CBI
003	10th Quarterly Acute	C.d.	2/8/11	100	100		1	CBI
003	11th Quarterly Acute	C.d.	5/11/11	100	100		1	CBI
003	12th Quarterly Acute	C.d.	9/8/11	100	100		1	CBI
003	13th Quarterly Acute	C.d.	11/9/11	100	100		1	CBI
003	14th Quarterly Acute	C.d.	3/8/12	100	95		1	CBI

C.d- *Ceriodaphnia dubia*

OUTFALL	DESCRIPT	SPECIES	SAMPLEDT	LC50	SURVIVAL	NOEC	TU	LAB
004	1st Annual Chronic	C.d.	3/3/08		100	100	1	CBI
004	2nd Annual Chronic	C.d.	3/2/09		100	100	1	CBI
004	3rd Annual Chronic	C.d.	3/8/10		100	50	2	CBI
004	Resample	C.d.	4/12/10		100	100	1	CBI
004	4th Annual Chronic	C.d.	8/1/11		100	100	1	CBI

OUTFALL	DESCRIPT	SPECIES	SAMPLEDT	LC50	SURVIVAL	NOEC	TU	LAB
008	1st Annual SW Acute	A.b.	4/3/08	43.5	0		2.3	CBI
008	2nd Annual SW Acute	A.b.	4/6/09	100	90		1	CBI
008	3rd Annual SW Acute	A.b.	8/17/10	100	100		1	CBI
008	4th Annual SW Acute	A.b.	11/23/11	100	100		1	CBI

OUTFALL	DESCRIPT	SPECIES	SAMPLEDT	LC50	SURVIVAL	NOEC	TU	LAB
011	4th Annual SW Acute	A.b.	2/18/08	100	100		1	CBI
011	3rd Annual SW Acute	A.b.	4/6/09	100	100		1	CBI
011	2nd Annual SW Acute	A.b.	11/4/10	100	85		1	CBI
011	1st Annual SW Acute	A.b.	11/17/11	100	100		1	CBI
012	4th Annual SW Acute	C.d.	2/18/08	100	90		1	CBI
012	3rd Annual SW Acute	C.d.	4/6/09	100	100		1	CBI
012	2nd Annual SW Acute	C.d.	11/4/10	100	95		1	CBI
012	1st Annual SW Acute	C.d.	11/17/11	100	100		1	CBI

Outfall 002 is sampled and also represents outfall 001. The discharge pipes for outfall 001 are located under water, therefore outfall 002 is sampled. There has been no toxicity issue at this outfall during the current permit term. However, toxicity monitoring at this outfall shall continue with the reissued permit due to the nature of the discharge. Both chronic and acute annual toxicity test shall continue using *Americamysis bahia.* Monitoring will continue on an annual basis.

Outfall 003 and 004 discharge stormwater from the ash landfill sedimentation ponds. Outfall 003 also has the potential to discharge truck washwater and dust suppression water. Outfall 003 has been monitoring on a quarterly basis during the current permit term for acute toxicity. During the last permit reissuance the permit was scheduled to get a WET limit due to chronic toxicity issues, however, the facility presented information about the outfall discharging as an acute discharge; therefore the WET limit was not placed in the permit. With this reissuance, the facility has asked for toxicity monitoring to be removed from outfalls 003 and 004 due to compliance history. Although outfall 003 has had no acute toxicity issues this permit term, the potential to have chronic toxicity still exists as the permit is written so that depending on how the facility discharges, chronic toxicity monitoring may still be needed. The monitoring frequency can be reduced though, based on compliance history during this permit term. Monitoring will be reduced from quarterly to semi-annually for outfall 003. Outfall 004 has been monitored annually during the current permit term and discharges stormwater from the ash pond. Although the facility asked for this outfall to be removed due to compliance history, it has not been in complete compliance with the toxicity endpoint. The facility had a failure in 2010. They did perform an additional sample to address data variability; however, this does not change the fact that the failure took place. An additional sample only helps with data variability for review if a limit is need or monitoring should be increased based on the statistical rate of failure. Because of the extra sample, there is no need to increase sample frequency, however, monitoring from outfall 004 will not be removed. Monitoring will continue in the reissued permit on an annual basis.

Traditional stormwater outfalls 008, 011, and 012 have been monitored during this last permit term on an annual basis. Outfall 008 has been monitored to also represent outfall 014. Outfall 008 has had evidence of toxicity, therefore monitoring at this outfall will continue on an annual basis using A.b. Since outfall 008 and 014 are considered representative, there is no reason to list outfall 014 in the toxicity screening program. Outfalls 011 and 012 were added at the last reissuance due to their location and activities, however, no toxicity issues have been noted during this current permit term. The facility has requested that outfalls 011 and 012 be removed from toxicity screening. Due to compliance, this request is granted. Only 008 will be required for toxicity screening in the reissued permit.

The following toxicity language is recommended for the reissuance of the VA Power –Yorktown permit (VA0004103).

C. TOXICS MANAGEMENT PROGRAM (TMP)

1. Biological Monitoring for outfalls 002 and 004

a. In accordance with the schedule in C.2.below, the permittee shall conduct annual toxicity tests for the duration of the permit.

The permittee shall collect a grab sample of final effluent from outfalls 002 in accordance with the sampling methodology in Part I.A. of this permit. The grab sample for toxicity testing shall be taken at the same time as the monitoring for the outfall in Part 1.A. of this permit. Annual acute and chronic tests shall be conducted for outfall 002 using:

48 Hour Static Acute test using **Americamysis bahia**

Chronic Static Renewal 7-day Survival and Growth Test with **Americamysis bahia**

The permittee shall collect a grab sample of final effluent from outfall 004 in accordance with the sampling methodology in Part I.A. of this permit. The grab sample for toxicity testing shall be taken at the same time as the monitoring for the outfall in Part 1.A. of this permit. An annual chronic test shall be conducted for outfalls 004. The chronic test to use is:

Chronic 3-Brood Static Renewal Survival and Reproduction Test using **Ceriodaphnia dubia**

b. The acute tests shall be performed with a minimum of 5 dilutions, derived geometrically, for the calculation of a valid LC_{50}. Express the results as TU_a (Acute Toxic Units) by dividing 100/ LC_{50} for reporting.

The chronic tests shall be conducted in such a manner and at sufficient dilutions (minimum of five dilutions, derived geometrically) to determine the "No Observed Effect Concentration" (NOEC) for survival and growth. Results which cannot be quantified (i.e., a "less than" NOEC value) are not acceptable, and a retest will have to be performed. Express the test NOEC as TU_c (Chronic Toxic Units), by dividing 100/NOEC for reporting. Report the LC50 at 48 hours and the IC25 with the NOEC's in the test report.

Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.3.

c. In the event that sampling of any of the outfalls is not possible due to the absence of effluent flow during a particular testing period, the permittee shall perform a make-up sample during the next testing period.

d. The permittee may provide additional samples to address data variability during the period of initial data generation. These data shall be reported and may be included in the evaluation of the effluent toxicity. Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.3.

e. The test dilutions shall be able to determine compliance with the following endpoints:

(1) Acute LC_{50} of 100% equivalent to a TU_a of 1.0

(2) Chronic NOEC of 100% equivalent to a TU_c of 1.0

2. Reporting Schedule

The permittee shall report the results and supply **one** complete copy of the toxicity test reports to the Tidewater Regional Office in accordance with the schedule below. A complete report must contain a copy of all laboratory benchsheets, certificates of analysis, and all chains of custody. **Attachment A** must be submitted with each complete report. All data shall be submitted within 60 days of the sample date.

(a)	**Conduct first annual TMP test for outfalls 002 using Americamysis bahia for 002 and Ceriodaphnia dubia for 004**	**By December 31, 2013**
(b)	**Submit results of all biological tests**	**Within 60 days of the sample date and no later than January 10, 2014**
(c)	**Conduct subsequent annual TMP tests for outfalls 002 and 004**	**By December 31, 2014, 2015, and 2016**
(d)	**Submit subsequent annual biological tests**	**Within 60 days of the sample date and no later than January 10, 2015, 2016 and 2017**

3. Biological Monitoring for Outfall 003

a. In accordance with the schedule in C.4.below, the permittee shall conduct semi-annual toxicity tests for the duration of the permit.

(1) The permittee shall collect a grab sample of final effluent for acute tests from outfall 003 in the same manner as samples collected for Part 1.A of this permit. The grab samples for toxicity testing shall be taken at the same time as the monitoring for the outfall in Part 1.A. of this permit.

(2) Chronic testing shall be required when the discharge is continuous for 8 hours or more a day for three consecutive days **OR** when the discharge occurs for four consecutive days regardless of the amount/time of discharge. The permittee shall submit monthly operational logs documenting days and times of discharge with the toxicity results.

If required, the permittee shall collect 3 grab samples over a 24 hour period for chronic tests from outfall 003 in accordance with the sampling methodology in Part I.A. of this permit.

Semi-annual acute and chronic (if required) tests shall be conducted for outfall 003 using:

48 Hour Static Acute test using **Ceriodaphnia dubia**

Chronic Static Renewal 7-day Survival and Growth Test with **Ceriodaphnia dubia**

b. The acute tests shall be performed with a minimum of 5 dilutions, derived geometrically, for the calculation of a valid LC_{50}. Express the results as TU_a (Acute Toxic Units) by dividing 100/ LC_{50} for reporting.

The chronic tests shall be conducted in such a manner and at sufficient dilutions (minimum of five dilutions, derived geometrically) to determine the "No Observed Effect Concentration" (NOEC) for survival and growth. Results which cannot be quantified (i.e., a "less than" NOEC value) are not acceptable, and a retest will have to be performed. Express the test NOEC as TU_c (Chronic Toxic Units), by dividing 100/NOEC for reporting. Report the LC50 at 48 hours and the IC25 with the NOEC's in the test report.

Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.3.

c. In the event that sampling of any of the outfalls is not possible due to the absence of effluent flow during a particular testing period, the permittee shall perform a make-up sample during the next testing period.

d. The permittee may provide additional samples to address data variability during the period of initial data generation. These data shall be reported and may be included in the evaluation of the effluent toxicity. Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.3.

e. The test dilutions shall be able to determine compliance with the following endpoints:

(1) Acute LC_{50} of 100% equivalent to a TU_a of 1.0

(2) Chronic NOEC of 100% equivalent to a TU_c of 1.0

4. Reporting Schedule

The permittee shall report the results and supply **one** complete copy of the toxicity test reports to the Tidewater Regional Office in accordance with the schedule below. A complete report must contain a copy of all laboratory benchsheets, certificates of analysis, all chains of custody, and the outfall 003 operational log. **Attachment A**

must be submitted with each complete report. All data shall be submitted within 60 days of the sample date.

(a)	**Conduct first semi-annual TMP tests for outfall 003 using Ceriodaphnia dubia**	**By June 30, 2013**
(b)	**Submit results of the biological tests**	**Within 60 days of the sample date and no later than July 10, 2013**
(c)	**Conduct subsequent semi-annual TMP tests for outfalls 003 using Ceriodaphnia dubia**	**By December 31 and June 30 each year**
(d)	**Submit subsequent semi-annual biological tests**	**Within 60 days of the sample date and no later than January 10 and July 10 of each year**

D. STORM WATER MANAGEMENT CONDITIONS

1. Sampling Methodology for Specific Outfalls XXXX

The following shall be required when obtaining samples required by Part I.A. of this permit:

a. At the time of sampling, the permittee shall ensure that the effects of tidal influences are kept to an absolute minimum. This can be achieved by:

(1) Sampling at low tide and/or

(2) Sampling at a representative point which has been demonstrated to be free of tidal influences

b. In the event that sampling of an outfall is not possible due to the absence of effluent flow during a particular testing period, the permittee shall provide written notification to DEQ Tidewater Regional Office with the DMR for the month following the period in which samples were to be collected.

2. Storm Water Management Evaluation

The Storm Water Pollution Prevention Plan (SWP3), which is to be developed and maintained in accordance with Part I.F.4 of this permit, shall have a goal of reducing pollutants discharged at all the regulated storm water outfalls.

a. Pollutant Specific Screening

The goal shall place emphasis on reducing, to the maximum extent practicable, the following screening criteria parameters in the outfalls noted below.

OUTFALL NO.	POLLUTANTS
XXX	

b. Toxicity Screening

The permittee shall conduct **annual acute toxicity tests** on outfall 008 using grab samples of final effluent. These acute screening tests shall be 48-hour static tests using **Americamysis bahia**, conducted in such a manner and at sufficient dilutions for calculation of a valid LC50.

The tests shall be conducted on a calendar year basis with one copy of all **results and all supporting information results and all supporting information submitted within 60 days of the date that the sample was taken and no later than January 10th of each year. Attachment A shall be submitted with the results.**

Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.3

If any of the biological screening tests are invalidated, an additional test shall be conducted within thirty (30) days of notification. If there is no discharge during this 30-day period, a sample must be taken during the first qualifying discharge.

c. Sampling methodology for the noted outfalls shall be in accordance with Part I.A. and Part I.C. of this permit. The permittee shall submit the following information **with the results of the toxicity tests.**

(1) The actual or estimated effluent flow at the time of the sampling.

(2) An estimate of the total volume of storm water discharged through each outfall during the discharge event.

(3) The time at which the discharge event began, the time at which the effluent was sampled, and the duration of the discharge event.

d. The effectiveness of the SWP3 will be evaluated via the required monitoring for all parameters listed in Part I.D.2.a. of this permit for the regulated storm

water outfalls, including the screening criteria parameters and toxicity screening. Monitoring results which are either above the screening criteria values or, in the case of toxicity, result in an LC_{50} of less than 100% effluent, will not indicate unacceptable values. However, those results will justify the need to reexamine the effectiveness of the SWP3 and any best management practices (BMPs) being utilized for the affected outfalls. In addition, the permittee shall amend the SWP3 whenever there is a change in the facility or its operation which materially increases the potential for activities to result in a discharge of significant amounts of pollutants.

By February 10th of each year, the permittee shall submit to the DEQ Tidewater Regional Office an annual report which includes the pollutant-specific and **a summary** of the biological monitoring data from the outfalls included in this condition along with a summary of any steps taken to modify either the Plan or any BMPs based on the monitoring data.
The first Stormwater Management Evaluation report is due on February 10, 2014.

ATTACHMENT A

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

TMP SUBMITTAL COVER SHEET

This form shall be completed for, and submitted with, each report of toxicity testing.

THIS REPORT SHALL CONTAIN THE FOLLOWING ITEMS	
	COMPLETED CHAIN OF SAMPLE CUSTODY
	CERTIFICATE OF ANALYSIS(ES)
	COMPLETE REPORT OF TOXICITY TESTING

VPDES PERMIT NUMBER: VA0004103

FACILITY NAME: Virginia Power-Yorktown

FACILITY LOCATION: 1600 Waterview Road, Yorktown VA 23692

OUTFALL NUMBER (circle one): 002 003 004 008

REPORTING PERIOD (ex: 2013 Annual, 1st Semi-Annual 2013): _____

SAMPLE TYPE (circle one): Stormwater Wastewater

WASTEWATER SOURCE(S) (if process wastewater, provide a brief source description):

_____

_____

SAMPLE EVENT INFORMATION (as applicable):

Sample Date and Time of Collection: _____

Time discharge began: _____

Storm event measurement (inches): _____

Time between sampling and
last measurable storm event (hours): _____

ADDITIONAL INFORMATION:

If this sample is a **make-up** sample or a **retest**, indicate which category of test and the reporting period this submittal applies to:

Report Type: (i.e., makeup, retest, etc.) _____

Reporting Period: _____

If the required TMP sample(s) were not collected provide a reason/rationale:

_____

CERTIFICATION:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. §1001 and 33 U.S.C. §1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)

_____

Signature, printed name and title of Principal Officer or Authorized Agent / Date

ATTACHMENT 9

MATERIAL STORED

4.0 POTENTIAL POLLUTANT SOURCES

Permit No.VA0004103, Part I.D.4.d.(2) Description of Potential Pollutant Sources *(SWPPP Cross Reference #5)*
Permit No.VA0004103, Part I.D.4.(b) Inventory of Exposed Materials *(SWPPP Cross Reference #6)*

A SWPPP evaluation and associated SPCC Plan updating reviews identify the following equipment and areas that could potentially impact storm water as a result of spills during oil or chemical transfer operations. The likelihood is low and is primarily associated with storm drain vicinity to the equipment/operation. Please refer to Appendix C for general sheet flow direction.

These areas represent the most likely areas where storm water can be impacted.

The balance of potential exposure would be limited to catastrophic equipment damage or loss including loss of secondary containment. Refer to the SPCC Plan. It is maintained under separate cover and it has a list of predicted quantity losses from all equipment assuming loss of secondary containment capacity for oil-containing equipment or tanks.

4.1 SUMMARY OF POTENTIAL POLLUTANT SOURCES

Permit No.VA0004103,Part I.D.4.d. 2.(e) Risk Identification and Summary of Potential Pollutant Sources *(SWPPP Cross Reference #9)*

Facility Area	Activity	Pollutant(s) or Pollutant Parameter(s)
Coal Yard	Products offloaded, stockpiled materials, product movement (i.e. conveyor system)	POLLUTANT: Coal, Coal Ash DIRECT EXPOSURE: Yes POTENTIAL TO DISCHARGE: Yes
Ash Landfill	Deposition and Compaction of Ash	POLLUTANT: Coal Ash DIRECT EXPOSURE: Yes POTENTIAL TO DISCHARGE: Yes
Ash Haul Roads	Hauling Ash to the Landfill	POLLUTANT: CCB associated pollutants DIRECT EXPOSURE: Yes POTENTIAL TO DISCHARGE: Yes
Outdoor Bulk Chemical Storage Areas	Items are stored and used in closed containers.	POLLUTANT: Sodium hypochlorite, sulfuric acid, sodium hydroxide, kerosene, No. 2 & 6 fuel oil, diesel fuel, gasoline, calcium hydroxide, actibrom, aqua ammonia DIRECT EXPOSURE: No POTENTIAL TO DISCHARGE: No
Loading and Unloading and Transfer Operation Areas (facility-wide) See Section 4.3 for more details	Unloading bulk chemicals adjacent to tank locations; transferring chemicals	POLLUTANT: Various chemicals See Bulk Chemicals listed in Section 4.2 DIRECT EXPOSURE: No POTENTIAL TO DISCHARGE: Yes
Metal/additional material storage area	Storage for piping, culverts and steel components	POLLUTANT: Rust and particles DIRECT EXPOSURE: Yes POTENTIAL TO DISCHARGE: Yes

4.2 Site Bulk Chemicals/ Materials

Chemical / Material Storage		
Storage Tank Type (Outfall)	**Storage Capacity (Gallons)**	**Secondary Containment (Gallons)**
*Ammonium Hydroxide or Aqua Ammonia (19%) (106)	25,000 gal. Northeast of Unit 1	Concrete berm-contains over 110% of tank capacity
*Combustion catalyst (008, 014)	6,000 gal. tank	Concrete berm (47,124 gal)
*Sodium Hypochlorite (15%) (008, 014)	10,000 gal tank Northwest of Station Intakes	Concrete berm (47,124 gal)
*Actibrom (008, 014)	6,000 gal tank Northwest of Station Intakes	Concrete berm (47,124 gal)
General Refuse (106 & 205)	N/A	Lidded dumpster & gravel bed
Scrap metal Dumpster (011& 205)	N/A	Lg. metal in good condition
Laydown Yard-metals (010 & 011)	N/A	Graded gravel

* Footnote: Currently not a direct exposure to Storm Water

Note: SARA Tier II Chemical Inventory Reports are submitted annually and stored on-site. The SARA reports provide information on bulk chemical storage and available upon request.

Chemical & Material Unloading & Transfer Facilities		
Unloading/Transfer Facility Name, Number, (Outfall)	**Spill Potential (Source)**	**Structural BMPs Secondary Containment (Gallons)**
Coal in Railcars and conveyor system (011)	Coal	Cars in good condition
Sodium hydroxide- North of Unit 1 in Reverse Osmosis Building	275 gal.	Makeup chemical delivered in drums, stored in the building.
Lime Slurry or Calcium hydroxide tanks (109)	Lime Slurry	Secondary containment around tanks, 28,618 gal. capacity
Bulk Chemical Transfers	Various chemicals – See list of bulk chemicals	Portable containment dike for truck
Warehouse (010 & 011)	Various Chemicals	Items moved inside upon delivery-building is secondary containment
CCB Transfer to Landfill (109)	CCB from trucks	CCB-carrying trucks are covered and are periodically inspected for defects that would contribute to CCB releases during transport.
Demineralization Trailers (106)	Demineralization water	Station procedures require a station employee to be present during trailer change-outs.
Sodium hypochlorite (008)	Sodium hypochlorite	Curbed Concrete Secondary Containment.
Combustion Catalyst Tank (008)	Combustion Catalyst	Curbed Concrete Secondary Containment.
Hydrochloric Acid (003)	55 gallon	Retention pond known as Pond 003.

4.3 Site Bulk Oil

The oil related tables are from the Station's SPCC Plan, and is maintained at the Station under separate cover.

Per agreements with Western Refinery, Yorktown Power Station is responsible for the VPDES Storm Water requirements in the Phase II (Tanks C, D and E) area. Since Phase II is regulated under the petroleum regulations, please refer to the relevant SPCC/ODCP Plan, which is maintained under separate cover. (Note, the storm water from Phase I (Tanks A & B) area is collected in discharged through Western Refinery VPDES system and incorporated into Western Refinery's SWPPP program.)

4.4 Sediment & Erosion

Permit No. VA0004103, Part I.D.4.d.(3)(g) Sediment and Erosion Control *(SWPPP Cross Reference #17)*

4.4.1 Sediment and Erosion Control and Management of Runoff

Permit No. VA0004103, Part I.D.4.d.(3)(h) Management of Runoff *(SWPPP Cross Reference #18)*

The Station utilizes curbs, concrete ditches, storm drain filters, retention valves, rip rap, vegetated swales, graveled areas and grates/inlets to control storm water runoff.

4.5.2 Construction Erosion & Sediment Control

Permit No. VA0004103, Part I.D.4.a.(1) Measures That Require Construction *(SWPPP Cross Reference # 3)*

Appendix F is reserved for Erosion Control and Sediment Plan insertion in the event of construction activity at the Station. Such plans are required for Construction Storm Water Permits and developed with a specific focus on site topography, drainage patterns, soils, ground cover, and adjacent runoff areas.

ATTACHMENT 10

RECEIVING WATERS INFO./
TIER DETERMINATION/STORET DATA/
STREAM MODELING/
303(d) LISTED SEGMENTS

Planning Permit Review

Date: 2/13/2012

To: Kristie Britt, TRO

Permit Writer: Melinda Woodruff

Facility: Dominion – Yorktown Power Station

Permit Number: VA0004103

Issuance, Reissuance or Modification (if Modification describe): Reissuance

Permit Expiration Date: 8/15/2012

Waterbody ID (ex: VAT-G15E): VAT-F27E, VAT-F27R, VAT-C07R

Topo Name: 065B Poquoson West

Facility Address:

1600 Waterview Road, Yorktown, VA 23692

Receiving Stream: Attached are topographic maps showing facility property boundaries and outfall(s) locations for those included in this request.

Stream Name: See Attachment 1 for multiple outfalls	
Stream Data Requested? No	
Outfall #:	**Lat Lon:**
Outfall #:	**Lat Lon:**
Outfall #:	**Lat Lon:**
Stream Name (2):	
Stream Data Requested?	
Outfall #:	**Lat Lon:**
Outfall #:	**Lat Lon:**
Outfall #:	**Lat Lon:**

If greater than 2 receiving streams or 3 outfalls per stream please provide a separate table with outfall listings and Latitude Longitude description.

Planning Review:

303 (d): Indicate Outfalls which discharge directly to an impaired (Category 5) stream segment and parameters impaired	
Outfalls 001,002, 005-009, 014-016 discharge to impaired segment VAT-F27E_YRK02B00. See Attachment 2 for listed impairments.	
Outfalls 003, 004, and 012 -013 discharge to intermittent low flow streams that are not listed on the 303d.	
Tier Determination	
Tier	Outfalls 001,002, 005-009, 014-016 discharge to the impaired segment VAT-F27E_YRK02B00 of the York River that is a Tier 1 stream. See Attachment 2 for listed impairments.
Tier	Outfalls 003, 004, and 012 -013 discharge to low flow streams that are Tier 1. See Attachment 3.
Management Plan	
Is the facility Referenced in a Management Plan?	No
Are limits contained in a Management Plan?	No

Review will be completed in 30 days of receipt of request.

Additional Comments:

KNB 3/6/2012

Outfall Number	Water Body	Receiving Stream	303(d) segment if applicable	Tier Determination	Latitude (degrees)	Latitude (minutes)	Latitude (seconds)	Longitude (degrees)	Longitude (minutes)	Longitude (seconds)
001	VAT-F27E	York River	F27E_YRK02B00	Discharge to impaired segment: Tier 1	37	13	1	76	27	27
002	VAT-F27E	York River	F27E_YRK02B00	Discharge to impaired segment: Tier 1	37	13	1	76	27	27
003	VAT-C07R	Unn trib to Chisman Creek		Intermittent low flow Stream : Tier 1	37	11	21	76	28	12
004	VAT-C07R	Unn trib to Chisman Creek		Intermittent low flow Stream : Tier 1	37	11	18	76	28	7
005	VAT-F27E	York River	F27E_YRK02B00	Discharge to impaired segment: Tier 1	37	12	57	76	27	43
006	VAT-F27E	York River	F27E_YRK02B00	Discharge to impaired segment: Tier 1	37	12	57	76	27	43
007	VAT-F27E	York River	F27E_YRK02B00	Discharge to impaired segment: Tier 1	37	12	57	76	27	43
008	VAT-F27E	York River	F27E_YRK02B00	Discharge to impaired segment: Tier 1	37	12	57	76	27	45

009	VAT-F27E	York River	F27E_YRK02B00	Discharge to impaired segment: Tier 1	37	12	55	76	27	53
010	VAT-F27R	drainage ditch to York River		Intermittent low flow Stream : Tier 1	37	12	40	76	27	50
012	VAT-F27R	drainage ditch to Wormley Creek		Intermittent low flow Stream : Tier 1	37	12	0	76	27	49
013	VAT-F27R	drainage ditch to Wormley Creek		Intermittent low flow Stream : Tier 1	37	12	3	76	27	50
014	VAT-F27E	York River	F27E_YRK02B00	Discharge to impaired segment: Tier 1	37	12	57	76	27	44
015	VAT-F27E	York River	F27E_YRK02B00	Discharge to impaired segment: Tier 1	37	12	57	76	27	41
016	VAT-F27E	York River	F27E_YRK02B00	Discharge to impaired segment: Tier 1	37	12	57	76	27	43

2010 Impaired Waters - 303(d) List

Category 5 - Waters needing Total Maximum Daily Load Study

York River Basin

Cause Group Code / Impaired Use	Water Name / Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Date
F24E-01-PH	Mattaponi River						
Aquatic Life	pH	5C	1.392			2010	2022
F24E-03-EBEN	Mattaponi River						
Aquatic Life	Estuarine Bioassessments	5A	2.826			2008	2020
F25E-01-BAC	Mattaponi River						
Recreation	Enterococcus	5A	2.535			2006	2018
F25R-01-BAC	Tastine Swamp and Little Tastine Swamp						
Recreation	Escherichia coli	5A			6.27	2010	2014
F25R-02-DO	Tastine Swamp						
Aquatic Life	Oxygen, Dissolved	5C			2.15	2010	2022
F25R-03-BAC	Tastine Swamp, UT						
Recreation	Escherichia coli	5A			2.40	2010	2022
F26E-01-PCB	York River Basin						
Fish Consumption	PCB in Fish Tissue	5A	0.397			2002	2014
	PCB in Fish Tissue	5A	57.413			2006	2018
F26E-05-BAC	York River						
Recreation	Enterococcus	5A	6.966			2006	2018
F26E-06-SF	Fox Creek						
Shellfishing	Fecal Coliform	5B	0.022			2006	2018
F26E-10-SF	Carter Creek						
Shellfishing	Fecal Coliform	5B	0.030			2004	2016
F26E-17-SF	Skimino Creek						
Shellfishing	Fecal Coliform	5B	0.191			1998	2010
F26E-18-SF	Taskinas Creek						
Shellfishing	Fecal Coliform	5B	0.028			1998	2010
F26E-19-SF	Ware Creek						
Shellfishing	Fecal Coliform	5B	0.083			1998	2010
F26E-20-SF	York River mainstem						
Shellfishing	Fecal Coliform	5B	5.882			2002	2014
F26E-21-SF	Bakers Creek						
Shellfishing	Fecal Coliform	5B	0.039			2002	2014
F26E-22-SF	Hockley Creek						
Shellfishing	Fecal Coliform	5B	0.058			2002	2014
F26E-23-SF	Bakers Creek						
Shellfishing	Fecal Coliform	5B	0.016			2008	2020
F26E-24-SF	Philbates Creek						
Shellfishing	Fecal Coliform	5B	0.013			2002	2014

2010 Impaired Waters - 303(d) List

Category 5 - Waters needing Total Maximum Daily Load Study

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

York River Basin

Cause Group Code / Impaired Use	Water Name / Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Date
YRKMH-DO-BAY	York Mesohaline						
Aquatic Life	Oxygen, Dissolved	5A	0.827			1998	2010
	Oxygen, Dissolved	5A	36.269			2006	2010
Open-Water Aquatic Life	Oxygen, Dissolved	5A	0.827			1998	2010
	Oxygen, Dissolved	5A	36.269			2006	2010
YRKMH-SAV-BAY	York Mesohaline						
Aquatic Life	Aquatic Plants (Macrophytes)	5A	37.096			2006	2010
Shallow-Water Submerged Aquatic Vegetation	Aquatic Plants (Macrophytes)	5A	37.096			2006	2010
YRKPH-DO-BAY	Lower York River, Perrin River, Carter, Sarah, Felgates, King and Wormley Creeks and Unsegmented Estuaries in CBP segment YRKPH						
Aquatic Life	Oxygen, Dissolved	5A	11.706			2004	2010
	Oxygen, Dissolved	5A	13.933			2006	2010
	Oxygen, Dissolved	5A	0.629			2008	2010
	Oxygen, Dissolved	5A	0.392			2010	2010
YRKPH-EBEN-BAY	Lower York River, Perrin River, Carter, Sarah, Felgates, King and Wormley Creeks and Unsegmented Estuaries in CBP segment YRKPH						
Aquatic Life	Estuarine Bioassessments	5A	23.635			2004	2022
	Estuarine Bioassessments	5A	0.041			2006	2022
	Estuarine Bioassessments	5A	2.983			2010	2022
YRKPH-SAV-BAY	Lower York River, Perrin River, Carter, Sarah, Felgates, King and Wormley Creeks and Unsegmented Estuaries in CBP segment YRKPH						
Aquatic Life	Aquatic Plants (Macrophytes)	5A	26.659			2006	2010
Shallow-Water Submerged Aquatic Vegetation	Aquatic Plants (Macrophytes)	5A	26.659			2006	2010

VA DEQ is transitioning from Fecal Coliform bacteria to Escherichia coli (fresh water) and Enterococci (salt water) for assessing the Recreation Use.

* Multiple listings are due to the same impairments for different uses and/or different initial listing dates for adjacent waters.

Appendix A - List of Impaired (Category 5) Waters in 2010

York River Basin

Cause Group Code: **F26E-01-PCB** **York River Basin**

Location: This cause encompasses the York River mainstem, from the Town of West Point (confluence of Mattaponi and Pamunkey Rivers) downstream to the mouth (line between Tue Point and Hog Island), and includes the tidal portions of the following tributaries: King Creek, Queen Creek and Wormley Creek.

City / County: Gloucester Co. James City Co. King And Queen Co. King William Co. New Kent Co.
Williamsburg City York Co.

Use(s): Fish Consumption

Cause(s) /
VA Category: PCB in Fish Tissue / 5A

The Fish Consumption Use is impaired based on the VDH fish consumption advisory for PCBs fish tissue contamination within the York River and select tidal tributaries, issued 12/13/04. During the 2004 IR cycle, a VDH Fish Consumption Restriction was issued for the York River, from the Town of West Point (confluence of Mattaponi and Pamunkey Rivers) downstream to the mouth (line between Tue Point and Hog Island), and includes the tidal portions of the following tributaries: King Creek, Queen Creek and Wormley Creek.

York River Basin **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCB in Fish Tissue - Total Impaired Size by Water Type:	**57.809**		

Sources:

Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2010

York River Basin

Cause Group Code: **YRKPH-DO-BAY** **Lower York River, Perrin River, Carter, Sarah, Felgates, King and Wormley Creeks and Unsegmented Estuaries in CBP segment YRKPH**

Location: This cause encompasses the entirety of the Lower York River system CBP segment YRKPH.

City / County: Gloucester Co. York Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 5A

The Aquatic Life and Open-Water Aquatic Life Use is impaired based on failure to meet the dissolved oxygen criteria for Open Water - Summer. The 30-day dissolved oxygen criteria for open water use failed for the 2008 assessment. There is insufficient data to assess remaining shorter-term dissolved oxygen criteria for this use. During the 2006 cycle, the revised Chesapeake Bay water quality standards were adopted. The York Polyhaline segment failed the Open Water Use's summer dissolved oxygen criteria.

Lower York River, Perrin River, Carter, Sarah, Felgates, King and Wormley Creeks and Unsegmented Estuaries in CBP segment YRKPH	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:	**26.659**		

Sources:

Agriculture	Atmospheric Deposition - Nitrogen	Industrial Point Source Discharge	Internal Nutrient Recycling
Loss of Riparian Habitat	Municipal Point Source Discharges	Sources Outside State Jurisdiction or Borders	Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)

Appendix A - List of Impaired (Category 5) Waters in 2010

York River Basin

Cause Group Code: **YRKPH-EBEN-BAY** **Lower York River, Perrin River, Carter, Sarah, Felgates, King and Wormley Creeks and Unsegmented Estuaries in CBP segment YRKPH**

Location: This cause encompasses the entirety of the Lower York River system CBP segment YRKPH.

City / County: Gloucester Co. York Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Estuarine Bioassessments / 5A

The Aquatic Life Use is impaired based on the estuarine bioassessment data to meet the Ches Bay Estuarine Benthic criteria.

Lower York River, Perrin River, Carter, Sarah, Felgates, King and Wormley Creeks and Unsegmented Estuaries in CBP segment YRKPH	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Estuarine Bioassessments - Total Impaired Size by Water Type:	**26.659**		

Sources:

Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2010

York River Basin

Cause Group Code: **YRKPH-SAV-BAY** **Lower York River, Perrin River, Carter, Sarah, Felgates, King and Wormley Creeks and Unsegmented Estuaries in CBP segment YRKPH**

Location: This cause encompasses the entirety of the Lower York River system CBP segment YRKPH.

City / County: Gloucester Co. York Co.

Use(s): Aquatic Life Shallow-Water Submerged Aquatic Vegetation

Cause(s) / VA Category: Aquatic Plants (Macrophytes) / 5A

The Shallow-Water Submerged Aquatic Vegetation Use is impaired based on failure to meet the SAV acreage criteria.

Lower York River, Perrin River, Carter, Sarah, Felgates, King and Wormley Creeks and Unsegmented Estuaries in CBP segment YRKPH	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Aquatic Plants (Macrophytes) - Total Impaired Size by Water Type:	**26.659**		

Lower York River, Perrin River, Carter, Sarah, Felgates, King and Wormley Creeks and Unsegmented Estuaries in CBP segment YRKPH	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Shallow-Water Submerged Aquatic Vegetation			
Aquatic Plants (Macrophytes) - Total Impaired Size by Water Type:	**26.659**		

Sources:

Agriculture	Atmospheric Deposition - Nitrogen	Clean Sediments	Industrial Point Source Discharge
Internal Nutrient Recycling	Loss of Riparian Habitat	Municipal Point Source Discharges	Sediment Resuspension (Clean Sediment)
Sources Outside State Jurisdiction or Borders	Wet Weather Discharges (Non-Point Source)	Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)	

VIRGINIA

305(b)/303(d)

WATER QUALITY INTEGRATED REPORT

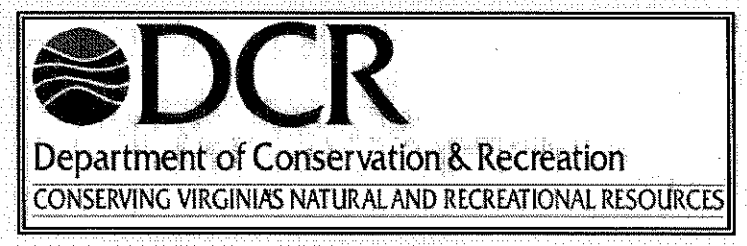
to

CONGRESS and the EPA ADMINISTRATOR

for the

PERIOD

January 1, 2003 to December 31, 2008



Richmond, Virginia

November 2010

Attachment 2-7

Until further guidance is provided by OWRM Permits, assessment of waters for NH_3 should be based upon OWRM Guidance No. 93-015 from Larry G. Lawson, dated June 22, 1993.

The above guidance specifies that the ambient NH_3 data should be compared to the NH_3 standard (calculated using 90th percentile of ambient data for pH and temperature of that segment) and by using the "STANDARDS.EXE Program" developed by OWRM Permits Modelling. (These environmental conditions are considered critical design conditions to protect water quality and to comply with WQS.) If the 97th percentile of the in-stream data is greater than either of the calculated NH_3 standards (chronic or acute), then OWRM considers the standard is being violated and the segment is WQL.

2.4.7 Wasteload Allocations Where The 7Q10 Is Zero *Or Minimal*

A discharge to a water course with a 7Q10 of zero or near zero would be required to have effluent limits that would comply with water quality standards, at a minimum. The discharge would have to be "self sustaining" so to comply with water quality standards. Therefore, the discharge would be WQL and the receiving water course with a 7Q10 of zero near zero would be considered a tier 1 segment.

Dry ditch = Tier 1

A discharge to a tier 1 water that empties into a tier 2 water would have to be evaluated for antidegradation at the point of confluence of the two water courses, if the discharge is in close enough proximity to impact the tier 2 water. In the above scenario, antidegradation requirements to protect tier 2 waters may apply to a discharge to a tier 1 water. Therefore, effluent limits may be more stringent than required by the numerical water quality standards.

If a discharge occurs to a dry ditch or tributary that empties into a free flowing stream and the distance from the discharge to the next confluence is too short to model (based upon the current modelling programs), then the discharge should be modelled as if it occurs directly to the free flowing stream.

2.4.8 Estuaries - Wasteload Allocations & TMDL Development

Similar to freshwater streams, water quality wasteload allocations (WQWLAs) and TMDLs in all tidal influenced waters will be expressed as a mass limitation for the conventional parameters (BOD_5, $cBOD_5$, TKN, and NH_3) and as a concentration for toxics.

Tidal freshwater segments and transition zone segments identified

Attachment 1-1

Tier 1 Justification for Low Flow Streams

DEPARTMENT OF ENVIRONMENTAL QUALITY

WATER DIVISION

OFFICE OF WATER RESOURCE MANAGEMENT

(SECOND DRAFT)

GUIDANCE MANUAL

FOR THE

VIRGINIA WATER QUALITY MANAGEMENT PLAN

March 4, 1994

Attachment I-2

TMDL Permit Review

Date: 2/13/2012

To: Jennifer Howell, TRO √ **JSH 3/8/2012**

Permit Writer: Melinda Woodruff

Facility: Dominion Yorktown Power Station.

Permit Number: VA0004103

Issuance, Reissuance or Modification (if Modification describe) : Reissuance

Permit Expiration Date: 8/15/2012

Waterbody ID (ex: VAT-G15E): See Attachment

Topo Name: 065B Poquoson West

Facility Address:

1600 Waterview Road, Yorktown, VA 23692

Receiving Stream: Attached are topographic maps showing facility property boundaries and outfall(s) locations for those included in this request.

Stream Name: See Attachment for multiple outfalls	
Click here to enter text.	
Outfall #: Click here to enter text.	**Lat Lon:** Click here to enter text.
Outfall #: Click here to enter text.	**Lat Lon:** Click here to enter text.
Outfall #: Click here to enter text.	**Lat Lon:** Click here to enter text.
Stream Name (2): Click here to enter text.	
Click here to enter text.	
Outfall #: Click here to enter text.	**Lat Lon:** Click here to enter text.
Outfall #: Click here to enter text.	**Lat Lon:** Click here to enter text.
Outfall #: Click here to enter text.	**Lat Lon:** Click here to enter text.

If greater than 2 receiving streams or 3 outfalls per stream please provide a separate table with outfall listings and Latitude Longitude description.

Is there a design flow change? If yes give the change. Click here to enter text.

TMDL Review:

Is a TMDL IN PROGRESS for the receiving stream? No	
Has a TMDL been APPROVED that includes the receiving stream?	
Yes – see below	
If yes, Include TMDL Name, Pollutant(s) and date of approval:	
1) Outfalls 001, 002, 005, 006, 007, 008, 009, 014, 015, and 016: Chesapeake Bay TMDL EPA Approval 12/29/2010: nitrogen, phosphorus, TSS 2) Outfalls 003 and 004: Total Maximum Daily Load Report for shellfish areas listed due to bacterial contamination – Poquoson River and Back Creek Approval 8/2/2006: Fecal coliform & enterococci	
Is the facility assigned a WLA from the TMDL?	No – see note below
If Yes, what is the WLA?	
1) VA0004103 was listed in the Chesapeake Bay TMDL under Bay segment YRKPH as a non-significant discharger. Because an aggregated WLA exists, this permit did not receive an individual WLA. The aggregated WLA is presented as a delivered load for each of the impaired 92 Bay segments. (Appendix Q) 2) VA0004103 outfalls 003 and 004 fall within the TMDL watershed boundary for the TMDL report listed above. However, no WLA was assigned.	

TMDL Permit Review

Review will be completed in 30 days of receipt of request.

Additional Comments:

Click here to enter text.

ATTACHMENT 11

TABLE III(a) AND TABLE III(b) - CHANGE SHEETS

TABLE III(a)

VPDES PERMIT PROGRAM
Permit Processing Change Sheet

1. Effluent Limits and Monitoring Schedule: (List any changes FROM PREVIOUS PERMIT and give a brief rationale for the changes).

OUTFALL NUMBER	PARAMETER CHANGED	MONITORING LIMITS CHANGED FROM / TO	EFFLUENT LIMITS CHANGED FROM / TO	RATIONALE	DATE & INITIAL
002	TSS, Dissolved Copper and Dissolved Zinc	None to 1/Year	None to NL	Moved SW parameters from several internal outfalls from 001, sampling takes place at Outfall 002 therefore that is where the monitoring will be recorded, BPJ	05/01/12 MYW
106, 107,108, 110	Flow, TSS, Dissolve Copper, Dissolved Zinc	1/Year to None	NL to None	Will be monitored through Outfall 002	05/03/12 MYW
001 and 002	Total Phosphorus	2/Month to 1/6 Months; Monthly Avg. to Daily Max		BPJ and good data	05/11/12 MYW
002	Enterococci	None to 1/3 Months	None to NL	BPJ and sample data	05/16/12 MYW
003/004	Total Phosphorus	Monthly Avg. to Daily Max		BPJ and good data	05/29/12 MYW
008/014	Total Phosphorus	Monthly Avg. to Daily Max		BPJ and good data	05/29/12 MYW
008/014	Flow		NL to NA for Monthly Avg.	BPJ	05/29/12 MYW

OTHER CHANGES FROM:	CHANGED TO:	DATE & INITIAL
All storm water outfalls with TPH monitoring (008, 014, 011 and 012)	[d] new standard language for TPH added	5/3/12 MYW
Part I.D.1.	Remove Outfall 106, 107, 108, 110	5/3/2012 MYW
316(b) condition updated and revised		5/16/12 MYW
O&M Manual condition updated		5/16/12 MYW
TMP condition revised based on review		5/17/12 MYW
Add uncontaminated river water to Part D.3.g.1.i list of allowable non storm water discharges		85/16/12 MYW
Removed Outfall 106, 107, 108, 110 from Storm water Management Conditions		5/16/12 MYW
Storm water Management Condition Part D updated and revised		5/16/12 MYW

TABLE III(b)

VPDES PERMIT PROGRAM
Permit Processing Change Sheet

1. Effluent Limits and Monitoring Schedule: (List any changes MADE DURING PERMIT PROCESS and give a brief rationale for the changes).

OUTFALL NUMBER	PARAMETER CHANGED	MONITORING LIMITS CHANGED FROM / TO	EFFLUENT LIMITS CHANGED FROM / TO	RATIONALE	DATE & INITIAL
001					

OTHER CHANGES FROM:	CHANGED TO:	DATE & INITIAL

ATTACHMENT 12

NPDES INDUSTRIAL PERMIT RATING WORKSHEET
AND
EPA PERMIT CHECKLIST

NPDES Permit Rating Work Sheet

_x_ Regular Addition
___ Discretionary Addition
___ Score change, but no status change
___ Deletion

NPDES NO: |V__|A__|_0_|0__|0__|4__|1__|0__|3__|

Facility Name:

|_D_|o_|m_|i_|n_|i_|o_|n_|___|_Y|o_|r_|k_|_t|_o_|w_|n_|___|_P|o_|w_|e_|r_|___|S_|t_|a_|t_|i_|o_|n_|___|___|___|

City: |Y_|o_|r_|k_|t_|o_|w_|n__|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|

Receiving Water: |_Y_|o_|r_|k_|___|R_|i_|v_|e_|r__|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|

Reach Number: |___|___|___|___|___|___|___|___|___|___|___|

Is this facility a steam electric power plant (SIC=4911) with one or more of the following characteristics?

1. Power output 500 MW or greater (not using a cooling pond/lake)
2. A nuclear power plant
3. Cooling water discharge greater than 25% of the receiving stream's 7Q10 flow rate

_x_ YES: score is 600 (stop here) ___ NO (continue)

Is this permit for a municipal separate storm sewer serving a population greater than 100,000?

___ YES; score is 700 (stop here)
___ NO (continue)

FACTOR 1: Toxic Pollutant Potential

PCS SIC Code: |___|___|___|___| Primary SIC Code: |___|___|___|___|

Other SIC Codes: |___|___|___|___| |___|___|___|___| |___|___|___|___| |___|___|___|___|

Industrial Subcategory Code: |___|___|___| (Code 000 if no subcategory)

Determine the Toxicity potential from Appendix A. Be sure to use the TOTAL toxicity potential column and check one

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
___ No process waste streams	0	0	___ 3.	3	15	___ 7.	7	35
___ 1.	1	5	___ 4.	4	20	___ 8.	8	40
___ 2.	2	10	___ 5.	5	25	___ 9.	9	45
			___ 6.	6	30	___ 10.	10	50

Code Number Checked: |___|___|

Total Points Factor 1: |___|___|

FACTOR 2: Flow/Stream Flow Volume *(Complete Either Section A or Section B; check only one)*

Section A--Wastewater Flow Only Considered

Wastewater Type (See Instructions)			Code	Points
Type I:	Flow < 5 MGD	___	11	0
	Flow 5 to 10 MGD	___	12	10
	Flow > 10 to 50 MGD	___	13	20
	Flow > 50 MGD	___	14	30
Type II:	Flow < 1 MGD	___	21	10
	Flow 1 to 5 MGD	___	22	20
	Flow > 5 to 10 MGD	___	23	30
	Flow > 10 MGD	___	24	50
Type III:	Flow < 1 MGD	___	31	0
	Flow 1 to 5 MGD	___	32	10
	Flow > 5 to 10 MGD	___	33	20
	Flow > 10 MGD	___	34	30

Section B--Wastewater and Stream Flow Considered

Wastewater Type (See Instructions)	Percent of Instream Wastewater Concentration at Receiving Stream Low Flow		Code	Points
Type I/III:	< 10%	___	41	0
	> 10% to < 50%	___	42	10
	> 50%	___	43	20
Type II:	<10%	___	51	0
	> 10% to < 50%	___	52	20
	> 50%	___	53	30

Code Checked from Section A or B: |___|___|

Total Points Factor 2: |___|___|

NPDES No.: |_V_|A_|0_|0_|0_|4_|1_|0_|3_|

FACTOR 3: Conventional Pollutants

(only when limited by the permit)

A. Oxygen Demanding Pollutant: (check one) ___ BOD ___ COD ___ Other:_____

Permit Limits: (check one)		*Code*	*Points*
___	< 100 lbs/day	1	0
___	100 to 1000 lbs/day	2	5
___	>1000 to 3000 lbs/day	3	15
___	>3000 lbs/day	4	20

Code Checked: |___|

Points Scored: |___|___|

B. Total Suspended Solids (TSS)

Permit Limits: (check one)		*Code*	*Points*
___	< 100 lbs/day	1	0
___	100 to 1000 lbs/day	2	5
___	>1000 to 5000 lbs/day	3	15
___	>5000 lbs/day	4	20

Code Checked: |___|

Points Scored: |___|___|

C. Nitrogen Pollutant: (check one) ___ Ammonia ___ Other: _____

Permit Limits: (check one)		*Code*	*Points*
___	< 300 lbs/day	1	0
___	300 to 1000 lbs/day	2	5
___	>1000 to 3000 lbs/day	3	15
___	>3000 lbs/day	4	20

Code Checked: |___|

Points Scored: |___|___|

Total Points Factor 3:|___|___|

FACTOR 4: Public Health Impact

Is there a public drinking water supply located within 50 miles downstream of the effluent discharge (this includes any body of water to which the receiving water is a tributary)? A public drinking water supply may include infiltration galleries, or other methods of conveyance that ultimately get water from the above referenced supply.

___ YES (if yes, check toxicity potential number below)
___ NO (if no, go to Factor 5)

Determine the human health toxicity potential from Appendix A. Use the same SIC code and subcategory reference as in Factor 1. (Be sure to use the human health toxicity group column -- check one below)

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
___ No process waste streams	0	0	___ 3.	3	0	___ 7.	7	15
___ 1.	1	0	___ 4.	4	0	___ 8.	8	20
___ 2.	2	0	___ 5.	5	5	___ 9.	9	25
			___ 6.	6	10	___ 10.	10	30

Code Number Checked: |___|___|

Total Points Factor 4: |___|___|

NPDES No.: |_V_|A_|0_|0_|0_|4_|1_|0_|3_|

FACTOR 5: Water Quality Factors

A. *Is (or will) one or more of the effluent discharge limits based on water quality factors of the receiving stream (rather than technology-based federal effluent guidelines, or technology-based state effluent guidelines), or has a wasteload allocation been assigned to the discharge?*

	Code	Points
___ Yes	1	10
___ No	2	0

B. *Is the receiving water in compliance with applicable water quality standards for pollutants that are water quality limited in the permit?*

	Code	Points
___ Yes	1	0
___ No	2	5

C. *Does the effluent discharged from this facility exhibit the reasonable potential to violate water quality standards due to whole effluent toxicity?*

	Code	Points
___ Yes	1	10
___ No	2	0

Code Number Checked: A |___| B |___| C |___|

Points Factor 5: A |___|___| + B |___| + C |___|___| = |___|___| **TOTAL**

FACTOR 6: Proximity to Near Coastal Waters

A. *Base Score: Enter flow code here (from Factor 2):* |___|___| *Enter the multiplication factor that corresponds to the flow code:* |___|___|

Check appropriate facility HPRI Code (from PCS):

HPRI #	*Code*	*HPRI Score*
___ 1	1	20
___ 2	2	0
___ 3	3	30
___ 4	4	0
___ 5	5	20

Flow Code	Multiplication Factor
11, 31, or 41	0.00
12, 32, or 42	0.05
13, 33, or 43	0.10
14 or 34	0.15
21 or 51	0.10
22 or 52	0.30
23 or 53	0.60
24	1.00

HPRI code checked: |___|

Base Score: (HPRI Score) _____ **x (Multiplication Factor)** _____ **=** _____ **(TOTAL POINTS)**

B. *Additional Points--NEP Program*
For a facility that has an HPRI code of 3, does the facility discharge to one of the estuaries enrolled in the National Estuary Protection (NEP) program (see instructions) or the Chesapeake Bay?

	Code	Points
___ Yes	1	10
___ No	2	0

C. *Additional Points--Great Lakes Area of Concern*
for a facility that has an HPRI code of 5, does the facility discharge any of the pollutants of concern into one of the Great Lakes' 31 areas of concern (see instructions)

	Code	Points
___ Yes	1	10
___ No	2	0

Code Number Checked: A |___| B |___| C |___|

Points Factor 6: A |___|___| + B |___|___| + C |___|___| = |_____| **TOTAL**

NPDES Permit Rating Work Sheet

NPDES NO: |V_|A_|0_|0_|0_|4_|1_|0_|3_|

SCORE SUMMARY

Factor	Description	Total Points
1	Toxic Pollutant Potential	_____
2	Flow/Stream flow Volume	_____
3	Conventional Pollutants	_____
4	Public Health Impacts	_____
5	Water Quality Factors	_____
6	Proximity to Near Coastal Waters	_____
	TOTAL (Factors 1-6)	_____

S1. Is the total score equal to or greater than 80? ___ Yes (Facility is a major) ___ No

S2. If the answer to the above question is no, would you like this facility to be discretionary major?

___ No
___ Yes (add 500 points to the above score and provide reason below:

Reason:

_____

_____

_____

_____

_____

NEW SCORE: ___600_____

OLD SCORE: ___600_____

_Melinda Woodruff_____
Permit Reviewer's Name

(_757___)_518-2174_____
Phone Number

__May 16, 2012_____
Date

State "Transmittal Checklist" to Assist in Targeting Municipal and Industrial Individual NPDES Draft Permits for Review

Part I. State Draft Permit Submission Checklist

In accordance with the MOA established between the Commonwealth of Virginia and the United States Environmental Protection Agency, Region III, the Commonwealth submits the following draft National Pollutant Discharge Elimination System (NPDES) permit for Agency review and concurrence.

Facility Name: Dominion - Yorktown Power Station

NPDES Permit Number: VA0004103

Permit Writer Name: Melinda Woodruff

Date: May 16, 2012

Major [x] **Minor** [ ] **Industrial** [x] **Municipal** [ ]

I.A. Draft Permit Package Submittal Includes:	**Yes**	**No**	**N/A**
1. Permit Application?	X		
2. Complete Draft Permit (for renewal or first time permit – entire permit, including boilerplate information)?	X		
3. Copy of Public Notice?		X	
4. Complete Fact Sheet?	X		
5. A Priority Pollutant Screening to determine parameters of concern?	X		
6. A Reasonable Potential analysis showing calculated WQBELs?	X		
7. Dissolved Oxygen calculations?		X	
8. Whole Effluent Toxicity Test summary and analysis?	X		
9. Permit Rating Sheet for new or modified industrial facilities?			X

I.B. Permit/Facility Characteristics	**Yes**	**No**	**N/A**
1. Is this a new, or currently unpermitted facility?		X	
2. Are all permissible outfalls (including combined sewer overflow points, non-process water and storm water) from the facility properly identified and authorized in the permit?	X		
3. Does the fact sheet **or** permit contain a description of the wastewater treatment process?	X		
I.B. Permit/Facility Characteristics - cont.	**Yes**	**No**	**N/A**
4. Does the review of PCS/DMR data for at least the last 3 years indicate significant non-compliance with the existing permit?		X	
5. Has there been any change in streamflow characteristics since the last permit was developed?		X	

6. Does the permit allow the discharge of new or increased loadings of any pollutants?		X	
7. Does the fact sheet **or** permit provide a description of the receiving water body(s) to which the facility discharges, including information on low/critical flow conditions and designated/existing uses?	X		
8. Does the facility discharge to a 303(d) listed water?	X		
a. Has a TMDL been developed and approved by EPA for the impaired water?	X		
b. Does the record indicate that the TMDL development is on the State priority list and will most likely be developed within the life of the permit?		X	
c. Does the facility discharge a pollutant of concern identified in the TMDL or 303(d) listed water?	X		
9. Have any limits been removed, or are any limits less stringent, than those in the current permit?		X	
10. Does the permit authorize discharges of storm water?	X		
11. Has the facility substantially enlarged or altered its operation or substantially increased its flow or production?		X	
12. Are there any production-based, technology-based effluent limits in the permit?	X		
13. Do any water quality-based effluent limit calculations differ from the State's standard policies or procedures?		X	
14. Are any WQBELs based on an interpretation of narrative criteria?	X		
15. Does the permit incorporate any variances or other exceptions to the State's standards or regulations?		X	
16. Does the permit contain a compliance schedule for any limit or condition?		X	
17. Is there a potential impact to endangered/threatened species or their habitat by the facility's discharge(s)?		X	
18. Have impacts from the discharge(s) at downstream potable water supplies been evaluated?			X
19. Is there any indication that there is significant public interest in the permit action proposed for this facility?		X	
20. Have previous permit, application, and fact sheet been examined?	X		

Part II. NPDES Draft Permit Checklist

Region III NPDES Permit Quality Checklist – for POTWs **NA**

(To be completed and included in the record only for POTWs)

II.A. Permit Cover Page/Administration	Yes	No	N/A
1. Does the fact sheet or permit describe the physical location of the facility, including latitude and longitude (not necessarily on permit cover page)?			
2. Does the permit contain specific authorization-to-discharge information (from where to where, by whom)?			

II.B. Effluent Limits - General Elements	Yes	No	N/A
1. Does the fact sheet describe the basis of final limits in the permit (e.g., that a comparison of technology and water quality-based limits was performed, and the most stringent limit selected)?			
2. Does the fact sheet discuss whether "antibacksliding" provisions were met for any limits that are less stringent than those in the previous NPDES permit?			

II.C. Technology-Based Effluent Limits (POTWs)	Yes	No	N/A
1. Does the permit contain numeric limits for ALL of the following: BOD (or alternative, e.g., CBOD, COD, TOC), TSS, and pH?			
2. Does the permit require at least 85% removal for BOD (or BOD alternative) and TSS (or 65% for equivalent to secondary) consistent with 40 CFR Part 133?			
a. If no, does the record indicate that application of WQBELs, or some other means, results in more stringent requirements than 85% removal or that an exception consistent with 40 CFR 133.103 has been approved?			
3. Are technology-based permit limits expressed in the appropriate units of measure (e.g., concentration, mass, SU)?			
4. Are permit limits for BOD and TSS expressed in terms of both long term (e.g., average monthly) and short term (e.g., average weekly) limits?			
5. Are any concentration limitations in the permit less stringent than the secondary treatment requirements (30 mg/l BOD5 and TSS for a 30-day average and 45 mg/l BOD5 and TSS for a 7-day average)?			
a. If yes, does the record provide a justification (e.g., waste stabilization pond, trickling filter, etc.) for the alternate limitations?			

II.D. Water Quality-Based Effluent Limits	Yes	No	N/A
1. Does the permit include appropriate limitations consistent with 40 CFR 122.44(d) covering State narrative and numeric criteria for water quality?			
2. Does the fact sheet indicate that any WQBELs were derived from a completed and EPA approved TMDL?			
II.D. Water Quality-Based Effluent Limits – cont.	**Yes**	**No**	**N/A**
3. Does the fact sheet provide effluent characteristics for each outfall?			

4. Does the fact sheet document that a "reasonable potential" evaluation was performed?			
a. If yes, does the fact sheet indicate that the "reasonable potential" evaluation was performed in accordance with the State's approved procedures?			
b. Does the fact sheet describe the basis for allowing or disallowing in-stream dilution or a mixing zone?			
c. Does the fact sheet present WLA calculation procedures for all pollutants that were found to have "reasonable potential"?			
d. Does the fact sheet indicate that the "reasonable potential" and WLA calculations accounted for contributions from upstream sources (i.e., do calculations include ambient/background concentrations)?			
e. Does the permit contain numeric effluent limits for all pollutants for which "reasonable potential" was determined?			
5. Are all final WQBELs in the permit consistent with the justification and/or documentation provided in the fact sheet?			
6. For all final WQBELs, are BOTH long-term AND short-term effluent limits established?			
7. Are WQBELs expressed in the permit using appropriate units of measure (e.g., mass, concentration)?			
8. Does the record indicate that an "antidegradation" review was performed in accordance with the State's approved antidegradation policy?			

II.E. Monitoring and Reporting Requirements	Yes	No	N/A
1. Does the permit require at least annual monitoring for all limited parameters and other monitoring as required by State and Federal regulations?			
a. If no, does the fact sheet indicate that the facility applied for and was granted a monitoring waiver, AND, does the permit specifically incorporate this waiver?			
2. Does the permit identify the physical location where monitoring is to be performed for each outfall?			
3. Does the permit require at least annual influent monitoring for BOD (or BOD alternative) and TSS to assess compliance with applicable percent removal requirements?			
4. Does the permit require testing for Whole Effluent Toxicity?			

II.F. Special Conditions	Yes	No	N/A
1. Does the permit include appropriate biosolids use/disposal requirements?			
2. Does the permit include appropriate storm water program requirements?			

II.F. Special Conditions – cont.	Yes	No	N/A
3. If the permit contains compliance schedule(s), are they consistent with statutory and regulatory deadlines and requirements?			
4. Are other special conditions (e.g., ambient sampling, mixing studies, TIE/TRE, BMPs, special studies) consistent with CWA and NPDES regulations?			

5. Does the permit allow/authorize discharge of sanitary sewage from points other than the POTW outfall(s) or CSO outfalls [i.e., Sanitary Sewer Overflows (SSOs) or treatment plant bypasses]?			
6. Does the permit authorize discharges from Combined Sewer Overflows (CSOs)?			
a. Does the permit require implementation of the "Nine Minimum Controls"?			
b. Does the permit require development and implementation of a "Long Term Control Plan"?			
c. Does the permit require monitoring and reporting for CSO events?			
7. Does the permit include appropriate Pretreatment Program requirements?			

II.G. Standard Conditions	Yes	No	N/A
1. Does the **permit** contain all 40 CFR 122.41 standard conditions or the State equivalent (or more stringent) conditions?			

List of Standard Conditions – 40 CFR 122.41

Duty to comply
Duty to reapply
Need to halt or reduce activity not a defense
Duty to mitigate
Proper O & M
Permit actions

Property rights
Duty to provide information
Inspections and entry
Monitoring and records
Signatory requirement
Bypass
Upset

Reporting Requirements
Planned change
Anticipated noncompliance
Transfers
Monitoring reports
Compliance schedules
24-Hour reporting
Other non-compliance

2. Does the permit contain the additional standard condition (or the State equivalent or more stringent conditions) for POTWs regarding notification of new introduction of pollutants and new industrial users [40 CFR 122.42(b)]?			

Part II. NPDES Draft Permit Checklist

Region III NPDES Permit Quality Review Checklist – For Non-Municipals

(To be completed and included in the record for all non-POTWs)

II.A. Permit Cover Page/Administration	Yes	No	N/A
1. Does the fact sheet **or** permit describe the physical location of the facility, including latitude and longitude (not necessarily on permit cover page)?	X		
2. Does the permit contain specific authorization-to-discharge information (from where to where, by whom)?	X		

II.B. Effluent Limits – General Elements	Yes	No	N/A
1. Does the fact sheet describe the basis of final limits in the permit (e.g., that a comparison of technology and water quality-based limits was performed, and the most stringent limit selected)?	X		
2. Does the fact sheet discuss whether "antibacksliding" provisions were met for any limits that are less stringent than those in the previous NPDES permit?			X

II.C. Technology-Based Effluent Limits (Effluent Guidelines & BPJ)	Yes	No	N/A
1. Is the facility subject to a national effluent limitations guideline (ELG)?	X		
a. If yes, does the record adequately document the categorization process, including an evaluation of whether the facility is a new source or an existing source?	X		
b. If no, does the record indicate that a technology-based analysis based on Best Professional Judgement (BPJ) was used for all pollutants of concern discharged at treatable concentrations?			X
2. For all limits developed based on BPJ, does the record indicate that the limits are consistent with the criteria established at 40 CFR 125.3(d)?	X		
3. Does the fact sheet adequately document the calculations used to develop both ELG and /or BPJ technology-based effluent limits?	X		
4. For all limits that are based on production or flow, does the record indicate that the calculations are based on a "reasonable measure of ACTUAL production" for the facility (not design)?	X		
5. Does the permit contain "tiered" limits that reflect projected increases in production or flow?		X	
a. If yes, does the permit require the facility to notify the permitting authority when alternate levels of production or flow are attained?			X
6. Are technology-based permit limits expressed in appropriate units of measure (e.g., concentration, mass, SU)?	X		

II.C. Technology-Based Effluent Limits (Effluent Guidelines & BPJ) – cont.	Yes	No	N/A
7. Are all technology-based limits expressed in terms of both maximum daily, weekly average, and/or monthly average limits?	X		
8. Are any final limits less stringent than required by applicable effluent limitations guidelines or BPJ?		X	

II.D. Water Quality-Based Effluent Limits	Yes	No	N/A
1. Does the permit include appropriate limitations consistent with 40 CFR 122.44(d) covering State narrative and numeric criteria for water quality?	X		
2. Does the record indicate that any WQBELs were derived from a completed and EPA approved TMDL?			X
3. Does the fact sheet provide effluent characteristics for each outfall?	X		
4. Does the fact sheet document that a "reasonable potential" evaluation was performed?	X		
a. If yes, does the fact sheet indicate that the "reasonable potential" evaluation was performed in accordance with the State's approved procedures?	X		
b. Does the fact sheet describe the basis for allowing or disallowing in-stream dilution or a mixing zone?	X		
c. Does the fact sheet present WLA calculation procedures for all pollutants that were found to have "reasonable potential"?	X		
d. Does the fact sheet indicate that the "reasonable potential" and WLA calculations accounted for contributions from upstream sources (i.e., do calculations include ambient/background concentrations where data are available)?			X
e. Does the permit contain numeric effluent limits for all pollutants for which "reasonable potential" was determined?	X		
5. Are all final WQBELs in the permit consistent with the justification and/or documentation provided in the fact sheet?	X		
6. For all final WQBELs, are BOTH long-term (e.g., average monthly) AND short-term (e.g., maximum daily, weekly average, instantaneous) effluent limits established?	X		
7. Are WQBELs expressed in the permit using appropriate units of measure (e.g., mass, concentration)?	X		
8. Does the fact sheet indicate that an "antidegradation" review was performed in accordance with the State's approved antidegradation policy?	X		

II.E. Monitoring and Reporting Requirements	Yes	No	N/A
1. Does the permit require at least annual monitoring for all limited parameters?	X		
a. If no, does the fact sheet indicate that the facility applied for and was granted a monitoring waiver, AND, does the permit specifically incorporate this waiver?			
2. Does the permit identify the physical location where monitoring is to be performed for each outfall?	X		
3. Does the permit require testing for Whole Effluent Toxicity in accordance with the State's standard practices?	X		

II.F. Special Conditions	Yes	No	N/A
1. Does the permit require development and implementation of a Best Management Practices (BMP) plan or site-specific BMPs?	X		
a. If yes, does the permit adequately incorporate and require compliance with the BMPs?	X		
2. If the permit contains compliance schedule(s), are they consistent with statutory and regulatory deadlines and requirements?			X
3. Are other special conditions (e.g., ambient sampling, mixing studies, TIE/TRE, BMPs, special studies) consistent with CWA and NPDES regulations?	X		

II.G. Standard Conditions	Yes	No	N/A
1. Does the **permit** contain all 40 CFR 122.41 standard conditions or the State equivalent (or more stringent) conditions?	X		

List of Standard Conditions – 40 CFR 122.41

Duty to comply
Duty to reapply
Need to halt or reduce activity not a defense
Duty to mitigate
Proper O & M
Permit actions

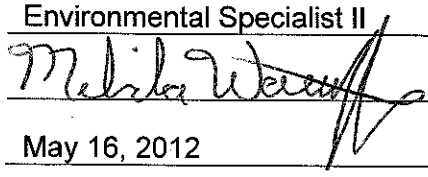
Property rights
Duty to provide information
Inspections and entry
Monitoring and records
Signatory requirement
Bypass
Upset

Reporting Requirements
Planned change
Anticipated noncompliance
Transfers
Monitoring reports
Compliance schedules
24-Hour reporting
Other non-compliance

2. Does the permit contain the additional standard condition (or the State equivalent or more stringent conditions) for existing non-municipal dischargers regarding pollutant notification levels [40 CFR 122.42(a)]?	x		

Part III. Signature Page

Based on a review of the data and other information submitted by the permit applicant, and the draft permit and other administrative records generated by the Department/Division and/or made available to the Department/Division, the information provided on this checklist is accurate and complete, to the best of my knowledge.

Name	Melinda Woodruff
Title	Environmental Specialist II
Signature	
Date	May 16, 2012

ATTACHMENT 13

CHRONOLOGY SHEET

Attachment 13
Chronology of Events
May 21, 2012

NPID: VA0004103 | Facility Name: Dominion - Yorktown Power Station | Activity: Reissuance

Code	Event	Date	Comment
DTC2EPA	EPA concurrence on draft permit		
DTPLAN	Planning concurrence on draft permit		
DTMIF	App sent to Fed Agencies (list in comment field)		
DTOBJ1	First time comments received from owner on draft		
DTOWNC3	Third time comments received from owner		
DTOWNC4	Owner concurrence of draft permit		
DTNEWS	Public notice letter sent to newspaper		
DTDDP	Draft permit developed	05/21/2012	
DTREV	Draft reviewed		
DT1PLAN	FS/SOB draft permit sent to planning		
SCCERTR	State Corporation certification received		na
RORTTC	Riparian owner request sent to tax commissioner		na
APRD2	Applic/Additional Info received at RO 2nd time	03/05/2012	
APRD3	Applic/Additional info received at RO 3rd time		na
APRET3	App returned/Additional info requested 3rd time		na
APRD4	Applic/Additional info received at RO 4th time		na
APCOMLET	App complete letter sent to permittee	03/13/2012	
DTOWN2	FS/SOB draft permit sent to owner 2nd time		
DTOWN4	FS/SOB draft permit sent to owner 4th time		
FLED	Permit expires		
DTSITE	Site visit	04/23/2012	
DTLP	Reissuance letter mailed	08/04/2011	corrected ltr sent 8/8/11
APRPHOCAL1	First Application Reminder Phone Call	10/24/2011	
FAMSUB	Financial Assurance Mechanism Submitted		na
APRET2	App returned/Additional info requested 2nd time		na
DTADJ	FS/SOB/draft permit sent to adj. State(s)		
DTOWN1	FS/SOB draft permit sent to owner		
PN2CO	PN sent to CO for mailing list web site distrib		
DTSIGN	Date Permit signed		
MISC	Miscellaneous		
APDU	Reissuance application due	02/17/2012	
APRD	Application received at RO 1st time	02/08/2012	
DTCOE	Comments rec'vd from Federal Agencies on App		
DT1VIMS	VMRC concurrence on draft permit		
DTOWNC2	Second time comments received from owner		
LGNPERM	Local gov't notification		
PNHEAR	Public hearing date		
DTEPA	FS/SOB draft permit sent to EPA/OWPS		
PREVFLED	Old expiration date	08/15/2012	
ROAPCP	Application Administratively complete	02/24/2012	need some lat and long for few of
DTC2VDH	VDH concurrence on draft permit		
PNOT	Date of Public Notice		

DTSITERP	Site inspection report	09/02/2009	
DTPKVDH	FS/SOB draft permit sent to State Agencies (list i		
APRPHOCAL2	Second Application Reminder Phone Call	01/04/2012	
LGNRAPP	local gov't notified of receipt of app. (Iss/Mod)		na
RONOTE	Riparian landowners notified (Iss,Mod)		na
DT1VDH	App sent to State Agencies (list in comment field)	02/16/2012	
DTC1VDH	Comments rec'vd from State Agencies on App		
DTOWN3	FS/SOB draft permit sent to owner 3rd time		
DTEFF	Permit effective		
DTDMRDUE	First DMR due		
VPDESNO	Permit number obtained (Iss)		na
APCP	Application totally / technically complete	03/12/2012	
DEPFEE	Application fee deposited		na
APRET1	App returned/Additional info requested 1st time	02/29/2012	
APRET4	App returned/Additional info requested 4th time		na
DTPNAUT	Public notice authorization received from owner		
316A	316(a) Variance		
ROLISTR	Riparian owner list received		na